Cost of Equity Effects from Mandatory IFRS Adoption – The Importance of Reporting Incentives

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ABSTRACT

This thesis examines how the cost of equity associates with reporting incentives in mandatory IFRS adoption for [18] European Union (EU) countries. First, with more data available for the post-adoption period, prior studies are extended by measuring if the mandatory adoption of IFRS in 2005 reduces the cost of equity. Second, using a comprehensive set of reporting incentives by both firm-specific core business factors (CBF) and internal corporate governance (ICG), and country-specific institutional environment factors (IEF), this study further investigates if both individual and interactive effects of reporting incentives in mandatory IFRS adoption are associated with cost of equity effects. Using a sample of 7,294 firm-year observations in the EU between 2000 and 2009, the findings show that, on average, mandatory adopters have a significantly lower cost of equity of 1.2% (significant at the 1% level using a two-tailed test). Also, the results provide evidence that mandatory IFRS adoption interacts with both firm-specific CBF and ICG and associates with significant differential effects in the cost of equity. In addition, when sampling firms are partitioned into different comprehensive legal, economic, social and cultural characteristics, mandatory adopting firms interact with CBF and/or ICG based on their particular IEF settings. Overall, these findings support the pro-incentive view that significant capital market benefits to shareholders cannot be derived by only adopting a single set of high quality accounting standards, unless firms have a high level of reporting incentives.

DEDICATION AND ACKNOWLEDGMENT

To my family - my wife Supriner, my son Michael, my daughter Michelle and my parents – for their love, care and support.

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Chapter 1 - Introduction

Globalization creates great opportunities for businesses to expand their international access[1]. At the same time, globalization also fosters the creation of a single global capital market which integrates and supports multi-national firms. One of the challenges is to ensure financial reports of global businesses are comparable and transparent so that users can be well-informed to make better investment decisions such as buying foreign equities. However, the existence of many different local accounting standards in countries makes comparison and analysis very difficult. Therefore, the solution is a set of one-for-all high quality accounting standards in all jurisdictions. International Financial Reporting Standards (IFRS) are generally regarded as enhancing the comparability of earnings and require additional disclosures (Nobes, 2001).

1.1 IFRS: Brief History and Evolution of Development

In 1973, representatives of the professional accounting bodies from major developed economic countries[2] agreed to establish the International Accounting Standards Committee (IASC), with the aim of developing a set of globalized accounting standards as the common accounting principles in different countries (Kim and Shi, 2007). Thus, under the commitment and great effort of IASC, the endeavor of working on a set of global accounting standards was advanced. As a result, a set of International Accounting Standards (IAS) was developed and gradually it received support and recognition internationally. An important milestone was achieved in 2000 when the International Organization of Securities Commissions (IOSCO) endorsed and recommended the IAS to securities regulators around the world (IOSCO 2000). Later, in 2001 the IASC became the International Accounting Standard Board (IASB) which was given more resources to formalize IAS into International Financial Reporting Standards (IFRS). The IASB was mandated to coordinate the harmonization process of IFRS with national accounting standard setting bodies around the world in order to develop a single set of high quality standards that are universally accepted so as to provide better information to investors and other users (Barth 2006).

[1] According to hubpages.com, globalization is defined as the system of integration among countries of the world in order to develop the global economy, involving technological, economic, political and cultural exchange made possible largely by advances in communication, transportation, and infrastructure.
[2] The participating countries for establishing the IASC are Australia, Canada, France, Germany, Japan, Mexico, Netherlands, the UK/Ireland and the U.S.A.

Since then, the convergence effort of IFRS with other local accounting standards has been getting more and more global acceptances. As a result, many countries have gradually mandated the adoption of IFRS to replace their local Generally Accepted Accounting Principles (GAAP)[3]. One of the greatest benefits for many countries is to enhance international comparability of financial results and position, and attract foreign capital investments in order to stimulate local economy.

To become internationally recognized, the IFRS have been designed as principle-based standards, and steps have been taken to remove other allowable accounting alternatives and to require accounting measurements that better reflect a firm's economic position and performance (IASC, 1989).

1.2 Motivations

Early research studies on the impact of adopting IFRS mainly analyze the average effects of IFRS adoptions with outcome variables such as earnings quality, liquidity and cost of capital (e.g. Leuz and Verrecchia, 2000; Barth et al., 2005; Cuijpers and Buijink, 205; Daske, 2006). Most of these studies characterize the observed effects being attributable to IFRS adoption per se, neglecting the underlying factors driving the adoption effect. Due to the fact that firms' reporting incentives are different and the strength of legal enforcement and investor protections varies substantially across countries, we can expect differences in the adoption effect from these factors. When some countries, such as Germany and Belgium, allowed firms to voluntarily adopt IFRS[4], early studies focused on testing whether there are capital market benefits, such as higher shares turnover, from voluntary adoption of IFRS. When the adoption of IFRS in many countries became mandatory (such as for the European Union, effective January 1st, 2005), studies have focused on the capital market consequences of such mandatory IFRS adoption, such as the change in the cost of equity. Due to the limited data available, however, most empirical studies focus on the initial stock market reaction to news of the mandatory adoption of IFRS (Soderstrom and Sun 2007). However, there is little empirical evidence to date giving conclusive results to support

[3] According to Investopedia.com, GAAP is defined as the common set of accounting principles prepared by national authoritative accounting bodies, standards and procedures that companies use to record accounting information and compile their financial statements.

[4] While the EU has regulations to adopt IFRS from January 1st, 2005, five EU members (Austria, Belgium, Germany, Finland and Luxembourg) allowed firms to switch to IFRS preparing for consolidated financial statements much earlier (than 2005) on a voluntary basis (Prather-Kinsey, et al. 2008).

any significant cost of equity effects. Overall, the academic debate is still open for the two different schools of thoughts as to whether there are cost of equity effects from adopting IFRS alone or whether these effects are due in part or in whole to reporting incentives. Thus, with more data available and better proxies for reporting incentives, the main purposes of this study is to (1) extend prior studies by testing if the cost of equity is reduced by mandatory IFRS adoption beyond the transitional period; and (2) shed some lights on the existing literature by examining if significant association between mandatory adoption of IFRS and cross-section effects in the cost of equity are actually shaped by differences in reporting incentives.

Proponents of common accounting standards (pro-standards view) argue that high quality accounting information, such as IFRS, will result in significant capital market benefits because high quality accounting disclosures will lead to a lower cost of equity (Barth et al. 2008). For instance, a recent study by Li (2010) provides evidence that, on average, mandatory IFRS-adopting firms have a lower cost of equity when (i) comparing pre- and post-mandatory periods; and (ii) comparing them with voluntary IFRS-adopting firms.

Another school of thought for reporting incentives (pro-incentives view) contends that accounting standards alone are not sufficient to ensure capital market benefits. Since IFRS is principle-based, there is discretion available to managers to exercise their judgement on how to report financial results. Therefore, reporting incentives rather than the accounting standards, will determine if financial reports by IFRS are of high quality (i.e. provide more and better disclosures and transparency). For instance, Daske et al. (2007) focus their IFRS tests on two stages. They do not find any changes in the cost of equity for mandatory IFRS adoption but, for firms with stronger reporting incentives, they document that when such motivated firms reduce asymmetric information in adopting IFRS standards in their financial reports, investors respond with a lower cost of equity compared to firms with weaker reporting incentives. Therefore, when incentives or commitment to financial reporting vary, financial reporting quality may be different. It may also result in different effects (i.e. heterogeneity) on capital market consequences (e.g. a different effect on the cost of equity).

However, these tests are mainly based on the data available in the transitional period of mandatory IFRS adoption, possibly indicating that these empirical results may be a short-term effect only. Also, when reporting incentives are not directly observable, prior studies do not comprehensively control for all relevant firm-level and institutional-level factors that may directly and indirectly influence reporting incentives. In addition, most IFRS literature argues that voluntary IFRS adopting firms may have stronger reporting incentives to switch to IFRS because of the expected differential capital market benefits (such as a lower cost of equity) compared to non-adopters. In contrast, when all EU firms had to adopt IFRS mandatorily at the same time (January 1, 2005), individual firms should gain no comparative advantage (Bova, 2009). Therefore, it is still an open question as to whether mandatory adopters have a lower cost of equity than voluntary adopting firms beyond the transition period. In addition, when Europe mandated to adopt IFRS, it prompted an interesting question on how such diverse firm- and country-specific characteristics across the EU enhance reporting incentives and how these may associate with different cost of equity effects. Empirical studies on the relationship between mandatory adoption and reporting incentives are still rare. Hence the present research aims to fill a gap in the existing literature in this area.

1.3 Research Objectives

Some prior studies support the pro-standard arguments that mandatory IFRS adoption may be expected to reduce the average cost of equity due to its requirements for greater disclosure than most local accounting standards (Ashbaugh and Pincus, 2001). However, these findings may not necessarily generalize to mandatory IFRS adoption. The pro-incentive view therefore supports the idea that when firms are mandated to adopt IFRS, those underlying differences in firm-specific factors such as size, profitability and corporate governance, and institutional factors such as legal enforcements may significantly influence reporting incentives. In turn, it may result in non-uniform cost of equity effects. Thus, this study has twofold objectives. First, to revisit, extend, modify and compare with prior studies by examining whether there is an association between the cost of equity and mandatory IFRS adoption since 2005 in EU countries beyond the transition period. Second, by developing the Influence, Process, Output and Outcome (IPOO) accounting harmonization model as proposed by Rahman et al. (2002) as a means of identifying if reporting incentives affect the cost of equity

effect[5]. The present study argues that such association is mainly attributable to differences in the reporting incentives in a mandatory setting and not simply by the introduction of new accounting standards alone. Using a larger and more representative dataset, and better proxies for reporting incentives and the ex-ante cost of equity, the current research tests the importance of reporting incentives in driving any variation of significant capital market effects in mandatory IFRS adoption.

To do so, there are two types of tests. First, this study tests for any overall effects of mandatory IFRS adoption on the cost of equity, (i) in comparison with voluntary IFRS adoption; and (ii) between the pre- and post-mandatory adoption periods. Next, it examines whether and how mandatory adoption is affected by proxies of reporting incentives. In particular, this study assesses if any changes in capital market effects (proxied by cost of equity) are associated with individual firm factors and interactions between firm-specific factors. In this study, reporting incentives are proxied as firms' Core Business Factors (CBF) and Internal Corporate Governance (ICG), and macro, namely Institutional Environment Effect (IEF).

In addition, this study uses data longer time frame for the post-adoption period (2000 to 2009), better metrics to measure the cost of equity (using Price-Earnings Growth (PEG) model), more comprehensive proxies for reporting incentives, and a larger cross-country based sample (18 countries in the EU) than prior research in this area. Using multiple regression models, the empirical results are designed to show whether overall mandatory IFRS adoption is related to significant capital market benefits; and if it is, whether such benefits are conditioned by reporting incentives (influenced by both firm and institutional environments) in the IPOO model.

1.4 Results

Controlling for the potential multicollinearity and endogeneity issues in modeling, empirical results from the multiple regression tests in general confirm that there is a statistically significant reduction in the cost of equity (COE) for mandatory adopters for the whole sampling period (2000 to 2009). However, contrary to some other studies (like Li, 2010), mandatory firms do not experience a greater decrease in cost of equity

[5] IPOO accounting harmonization model will be explained in details in the Literature Review section in Chapter 2. Basically it is developed by Rahman et al. (2002) illustrating that conceptually accounting harmonization can be achieved by the four-inter-related components.

in the post-adoption period. This suggests that the significant reduction in the COE evident in prior studies is mainly attributed to the transition effect. Also, the evidence shows that high CBF firms experience an incremental lower cost of equity. It implies that there is a significant association between mandatory firms with high CBF such as high ROE, high TobinQ and high market value of equity, and a greater reduction in the cost of equity.

Next, this study examines if another firm-specific influence on reporting incentive – Internal Corporate Governance (ICG) — plays a role in relation to the reduction in the cost of equity during mandatory IFRS adoption. Findings reveal that the Deminor corporate governance index[6] shows a small but significant reduction effect on the cost of equity. It suggests that, from the equity investors' viewpoint, Board of Directors' internal governance mechanisms and efforts to monitor and regulate managers in exercising their discretion in IFRS financial reporting are relevant and important in mandatory adoption of IFRS.

When high Core Business Factors (CBF) interacts with ICG in the model, it is documented that for mandatory adopters there is a complementary effect of further lowering the cost of equity. These empirical results support the pro-incentive view that a joint effort between firms' high CBF and ICG can enhance reporting incentives in mandatory IFRS adoption. As a result, high quality financial reports are produced that possibly lead to a lower cost of equity.

In addition, this study also examines if the macro-level institutional environment factors (IEF) in mandatory IFRS adoption are associated with a lower cost of equity. After partitioning sampling firms in the EU into four different general legal, economic, social and cultural origins; namely British Origin (BO), French Origin (FO), German Origin (GO) and Scandinavian Origin (SO), these are tested to determine whether dissimilar institutional settings are associated with differential effects on the cost of equity in mandatory IFRS adoption. As expected, only BO and FO are significantly related to a lower cost of equity. GO responds insignificantly and SO shows a positive effect on the cost of equity. This suggests that in mandatory IFRS adoption, the highly diverse

[6] Deminor is a leading European company advising clients on corporate governance practices, capital market transaction and business valuations (www.deminor.com/en). The company measures annual comprehensive corporate governance index based on a complete list of criteria. Details of such index will be presented in Ch.3 and 4.

institutional characteristics in the EU influence reporting incentives differently and that this leads to differences on the effect on the cost of equity. These findings are further supported by the results from testing the cost of equity effect from mandatory firms' interaction between strong CBF and the four legal origins. Due to the underlying differences in cultural, economic and legal background, only GO and FO mandatory firms' strong CBF are related to the lower cost of equity. Furthermore, following prior studies to proxy IEF with institutions' bureaucratic and administrative formalities, this study tests such institutional proxies have any effects on the cost of equity in mandatory IFRS adoption. The results support the proposition that those countries in mandatory IFRS adoption build up infrastructures to support capital market development and consequently associated with lowering cost of equity effect.

Finally, interdependence between all three proxies of reporting incentives (i.e. CBF, ICG and IEF) in the IPOO model in mandatory IFRS adoption is modeled for testing how mandatory adopters' strong CBF and ICG interact with different legal origins that may associate with any reducing cost of equity effect. The findings support the hypothesis that cost of equity effects differ among legal origins. Particularly, BO mandatory firms with more established capital market environments interact significantly with ICG to associate with a lower cost of equity. For GO and FO mandatory firms, on the other hand, high level of reporting incentives are empowered by strong CBF to relate with a lower cost of equity. SO mandatory firms, however, do not link to any additional reduction in the cost of equity. Probably this is due to their lack of significant firm- and country-specific factors to promote reporting incentives in mandatory IFRS adoption during the sampling period.

Besides using overall legal origins as the proxy for IEF, this study follows the literature and examines whether specific IEF factors such as investor protections and stock market disclosure requirements may also influence reporting incentives and be associated with lower cost of equity for mandatory adopters. The results indicate that among a few specific legal mechanisms, only stock exchange disclosure has a significant effect on a lower cost of equity for mandatory adopters. This is consistent with the literature that mechanisms to promote and enforce greater and better disclosures along with IFRS may lead to lower cost of equity. Further empirical tests also show that among the four legal origins, only British-origin (BO) mandatory firms interact with stock exchange disclosure requirements and are associated with a significant lower cost of equity effect.

This result accords with the literature that in mandatory IFRS adoption, countries domiciled in institutional environments that expect and demand high level of disclosures in reporting requirements are benefitted by additional lower cost of equity.

1.5 Contributions

By revisiting and validating prior studies, the current study extends the tests for the post-mandatory adoption period beyond the transition period and examines if the COE is lowered by mandatory IFRS adoption rather than simply being a transitional effect. Moreover, the present study examines the important role of reporting incentives in adopting new accounting standards that associate with reduced COE. By using comprehensive proxies of reporting incentives, including firm-specific strong core business factors and board of directors' internal corporate governance, and country-level diverse institutional environment factors, results of various empirical tests suggest that the reduced COE effect in the overall mandatory IFRS adoption may be mainly attributable to those adopters with strong reporting incentives.

On average, both individual and interactive effects of CBF and ICG in adopting IFRS show significant effect on lowering the cost of equity. The empirical results support the incentives-view that if firms have strong reporting incentives in mandatory IFRS adoption, firms will commit and devote in full compliance. As a result, information asymmetry between investors and managers should be improved; and the required cost of equity may be lowered. In addition, empirical results prove that internal corporate governance implemented by firms' board of directors is important to relate to the lower COE because a high level of governance may lead to high level of reporting incentives for managers to adopt IFRS with full compliance.

Furthermore, this study shows that differences in country-specific institutional factors such as cultural and business practices in mandatory IFRS adoption exercise an influence on managers' reporting incentives. Test findings exhibit that dissimilar IEF factors shape reporting incentives and hence associate with differences in firms' COE.

The empirical results shed some light on the existing literature by reinforcing the important roles of reporting incentives in mandatory IFRS adoption (e.g. Daske et al., 2007, Bova 2009, Bova and Pereira, 2009). In particular, firm-specific CBF and ICG, and country-specific IEF systematically influence reporting incentives in adopting IFRS

that lead to differential effects in the cost of equity. Overall, the findings add to and support the incentive-view on prior studies which mainly focus on accounting standards-effect (e.g. Barth et al. 2008, Hail and Leuz, 2007, Prather-Kinsey et al., 2008). The present results clearly show that prior studies that found that voluntary and mandatory adoption of IFRS alone create significant reduction in the cost of equity are limited in that their results are only valid for the short-term (transitional) stage effect and are subject to non-comprehensive measurement metrics and proxies.

In addition, this study provides empirical results to support that interaction effects between CBF and ICG in different IEF associate with significant lower cost of equity. It highlights an important fact that substantial capital market benefits from adoption of IFRS needs strong reporting incentives.

A recent paper by Lee et al, (2010) also examines the cost of equity in Europe when it is mandated with IFRS. Initially, Lee et al. (2010) find a 0.72 percent reduction in the cost of equity using the same measurement metric as this study (i.e. PEG model). The researchers also partition and estimate a composite score for EU countries with high and low reporting incentives based upon their institutional characteristics indicators, namely, outside rights, the importance of equity market, ownership concentration, disclosure quality, and earnings management. Empirical results indicate that significant lower cost of equity is only possible for firms domiciled in high-incentive countries. Their results strongly confirm the argument presented here that desirable benefits from the capital market mainly are attributable to the pro-incentive view, not the accounting standards alone. However, a weakness in the Lee et al study is that it uses the sample period from 1995 to 2006 in the Europe Union, which is the same as the study by Li (2010). Both studies have the same issue of only measuring the cost of equity effect during the transitional period, rather than for an extended period as per this current study (which uses data from 2000 to 2009). Also, even though the approach used by Lee et al. (2010) to proxy reporting incentives by specific institutional characteristics is similar to this study's additional analysis, it ignores other important firm-specific factors to influence reporting incentives in the IPOO model such as business characteristics and internal corporate governance.

Similar to another prior study by Daske et al. (2008) that capital market benefits from mandatory IFRS adoption come from institutional environments which provide incentive for transparency, the results of Lee et al. (2010) conclude that countries with high (low) reporting incentives and enforcement yield significantly lower (higher) cost of equity. However, since firm-specific factors are not systematically examined, as one may argue that it is possible that there are high firm-specific incentives in IFRS adoption for low institution countries that still relate to capital market benefits (Bova, 2009). Hence, contrary to the results by Lee et al. (2010), the present study shows that mandatory IFRS firms with high firm-specific factors (CBF) domiciled in low level of country-specific incentive countries, but associated with the lower cost of equity, such as German origin (GO), consequently can have a positive effect on the cost of equity.

The remainder of the thesis is organized as follows. In Chapter 2, the literature on IFRS adoption and its benefits is discussed, and then the research gap is identified. In Chapter 3, the literature synthesis from Chapter 2 will be explained and elaborated in order to develop the basic theory and theoretical framework. Then it is followed by Chapter 4 on the research questions, aims, objectives and hypotheses. Chapter 5 will follow the rationales of Chapter 4 to discuss sample design and data collection. In Chapter 6, the research methodologies and models are described in detail. From Chapter 7 to 10, results of the various univariate and multivariate regression tests, and additional analyses, are presented, analyzed and discussed. Finally, Chapter 11 provides some conclusion and provides suggestions for future research.

Chapter 2 – Literature Review

The academic accounting community generally recognizes that even though IFRS may be of higher quality than local accounting standards (Ball et al. 2000; Ball et al. 2003; Ball 2006, Daske et al. 2007; Barth et al. 2008; Horton et al. 2008; Lopes and Walker 2008), the capital market benefits that result from the harmonization of accounting practices may still vary due to differences in certain firm-specific and institutional characteristics. In the following section, a thorough review will be presented of the literature on accounting harmonization, the voluntary adoption of IFRS and then the mandatory IFRS adoption. At the end, the research gap in the literature is identified.

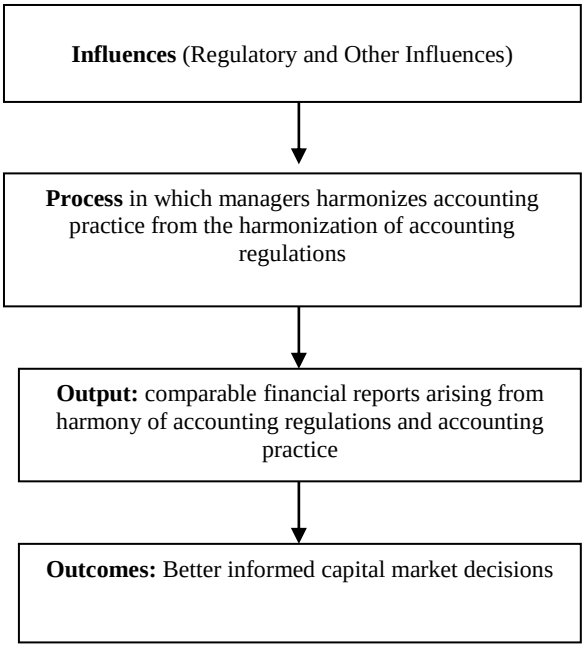
2.1 Research on International Accounting Harmonization

As accounting standards and practices are harmonized globally, researchers are refining their definitions of acceptable outcomes. Early studies like Rahman et al. (2002) introduce the concept of accounting harmonization as an inter-related and inter-dependent process. It can be characterized by four sequential and essential components, namely, influences, process, output and outcome (IPOO). Figure 2.1 shows the model. "Influences" refer to both regulatory influences (i.e., Statutory, Stock Exchange and Accounting Standards) and other influences such as firm- and country-specific characteristics, and international factors. "Process" means the actual accounting practice harmonization. "Output" includes comparable accounting numbers arising from accounting harmony; and finally "Outcome" equals better informed capital market decisions.

Figure 2.1

The Four Stages of Accounting Harmonization

Rahman, Perera and Ganesh (2002) introduce the concept that accounting harmonization is a process characterized by four sequential and essential components, namely, influences, process, output and outcome (IPOO).
Influences are mainly consisted of regulatory and others. Regulatory influences come from statutory, stock exchange and accounting standards that foster the process of harmonization of accounting regulations. Other influences include firm characteristics, country characteristics, and international factors (namely, trade and investment agreements, international regulatory institutions and colonial influences).



To test this, Rahman et al. use both the Jaccard coefficient and the chi-square distribution and show that harmonization of regulations improves accounting practices. Where there are significant differences such as size or auditing practices between two countries, regulations may not be enough to achieve such harmonization. In addition, Rahman et al. (2002) also argue that institutional differences between countries such as international trade and investment agreements, regulatory bodies and colonial influences affect accounting practice harmony. While the Rahmen et al. study (2002) illustrates that to achieve comparable accounting numbers from the harmonization of accounting practice (i.e. output) it depends upon the harmonization of accounting regulations and other influences. A failing of the study is that it neither systematically examines other institutional factors such as the legal and investor protection mechanisms nor measures any specific capital market results (such as cost of equity or accounting quality).

The first wave of the literature in international accounting studies focus on measuring the effects from institutional characteristics such as cultural and legal systems. Prior studies (Gray, 1980; Hofstede, 1980; Nobes, 1992; Perera, 1989; Radebaugh & Gray, 1995) use cluster analysis to examine how culture interacts with accounting practices and regulations. Other studies work on different aspects of regulation harmonization, especially the association between characteristics of listed firms and the level of disclosure requirements by a stock exchange (Adhikari & Tondkar, 1992). Another stream of empirical studies focus on macro-environmental factors as influences to test the link between cultural values and the effects on accounting practice and disclosure (Gray, 1980; Jaggi, 1975; Perera, 1989; Doupnik & Salter, 1995; Zarzeski, 1996). In particular, Hofstede (1980) develops a cultural model to demonstrate that cultural characteristics among countries correlate negatively in terms of uncertainty avoidance and power distance, and positively with individualism and masculinity. Besides cultural values, researchers want to test whether any business-related variables have effects on financial disclosures. For example, Zareski (1996) finds evidence that, instead of cultural values, firms that have an international presence and market forces influence disclosure practices.

In addition to market forces, Gray (1988) develops a model to argue that institutional factors, such as legal systems, are more important than comprehensive accounting systems (namely accounting standards, practices and financial disclosures). Following this line of thinking, La Porta et al. (1998) pioneer the study of the distinct legal roles

from common and code law-based countries on firms' accounting practices and disclosures. Similarly, numerous empirical studies such as Adhikari and Tondkar, (1992); Ball, R., (1998); Ball, R., et al. (1998); Salter, 1998; Zarzeski, (1996) posit that firms in common law and code law jurisdictions display significant differences and characteristics of corporate ownership (widely dispersed vs. concentrated ownership), corporate capital structure (equity-based vs. debt-based) and capital market developments (equity markets or private lending sources). As a result, such variations will lead to different information needs from investors and debt-holders. Subsequently, it will exercise discernible effects on financial accounting and disclosure practices. For instance, firms in common law countries will exercise more public disclosure due to the demand by widely-dispersed equity owners, and are perceived to be more effective in resolving information asymmetry between managers and shareholders. However, code-law based firms rely more on private debt financing, and have more concentrated equity ownership, therefore private communication between agents and principals/debt-holders is more common. This conjecture is further supported by Jaggi and Low (2000) who find that, due to the different legal structures, financial reporting and disclosure practices will not be the same. As a result, common law countries are associated with higher financial disclosure than firms from code law countries. In addition, Jaggi and Low (2000) argue that globalization and internalization of businesses will lessen the importance of cultural values on financial reporting and disclosure.

Researchers, such as Emenyonu and Gray, 1992; Evans & Taylor, 1982; Nair and Frank, 1981; Walton, 1992, have also investigated the effects of accounting regulations on accounting practice harmony at global and regional levels. Earlier studies (Choi, 1983; Gray, 1980; Hellman, 1993) demonstrate how the relationship between accounting practice harmonization and accounting numbers, such as profit, and key financial ratios shape accounting practice differences. Later, as more countries adopt IFRS voluntarily, international accounting research shifts to the association between accounting regulation harmonization via IFRS and capital market consequences, such as the relationship between share prices and different accounting standards (Alford and Jones, 1993; Amir et al. 1993; Barth & Clinch, 1996; Harris et al.1994).

Some countries, such as Germany, have allowed firms to adopt IFRS voluntarily, before it became mandatory on January 1, 2005. Where IFRS is not mandatory, there are some

firms and managers who are willing to adopt it. In the light of this, researchers have examined if such firms may have particular expectations and commitments.

In summary, the early literature on international accounting research is valuable in understanding empirically the relationship between accounting regulation harmonization, its process and output. However, the literature ignores the importance of ultimate outcomes (i.e., capital market consequences) of accounting regulations such as IFRS. In addition, the comprehensive relationships among the variables of the IPOO concept (Rahman et al. 2002) have not been addressed.

2.2 Voluntary adoption of IFRS

The evidence shows that voluntary adoption of IFRS by various countries accelerated in the 1990s. More and more firms seeking capital from international sources have adopted IFRS, especially stock exchanges in Europe[7] (Soderstrom & Sun, 2007). Furthermore some national accounting regulators—such as Germany's—allowed firms to adopt IFRS before the mandatory implementation date. This raises two empirical questions:

(1) Does IFRS have higher quality accounting standards than the local GAAP? According to the early study by Rahman et al. (2002), accounting standard, such as IFRS, is one of the influences for firms preparing financial statements. If IFRS produces a higher quality than the local GAAP, and some firms voluntarily adopt IFRS for users, this indicates a better influence and process, hence a better output. If early IFRS adoption produces higher quality accounting information, does that mean that IFRS alone is sufficient? However, voluntary IFRS adopters may be different to other firms which have not adopted IFRS. Thus, studies examine the types of firms, the factors that drive their decision, and the particular characteristics provide the motivation for voluntary adoption.

(2) The conceptual model of IPOO (Rahman et al. 2002) contends that a higher quality of accounting output should result in better outcomes for those firms who have voluntarily adopted IFRS. Thus, whether voluntary IFRS adoption is associated with

[7] For example, Germany's New Market was launched in 1997 to aid small hi-tech companies in raising equity capital is required to choose either U.S. GAAP or IAS, the predecessor to IFRS.

subsequent economic consequences in the capital markets is another focus for empirical studies.

In the following sections, the literature addressing these two questions will be discussed.

2.2.1 Research on perceived higher quality of voluntary IFRS versus local GAAP

Research studies (Barth et al., 2008) on voluntary IFRS adoption propose that IFRS possesses a higher quality of accounting standards than domestic GAAP, therefore, providing benefits to adopting companies. However, overall the evidence shows that there are inconsistent and mixed results, depending on the proxies for accounting quality, sample size and measurement metrics used.

Hail & Leuz, (2006) recognize that IFRS, being a principle-based accounting rule, provides managers with substantial discretion to influence how informative earnings are, but this private managerial incentive cannot be observed directly. Therefore, researchers rely on different metrics, such as earnings management practices, bid-ask spread and proxies of value relevance. Empirical tests are conducted to measure if between the pre- and post-voluntary IFRS adoption periods there are differences in the metrics as a way to approximate the extent of reporting higher accounting quality.

However, the question is: how do researchers determine that IFRS is of higher quality? Evidence to support the higher quality of IFRS over local GAAP is documented by a group of studies (Bartov et al. 2005, Barth et al. 2008). Gassen and Sellhorn (2006) suggest that IFRS numbers are of higher quality for German firms from 1998 to 2004. According to Gassen and Sellhorn (2006), significant differences in earnings quality are documented when IFRS firms have more persistent, less predictable and more conditionally conservative earnings than comparable German firms using local accountant standards (HGB). The result is confirmed by testing the proxies of information asymmetry differences between IFRS and HGB firms. Specifically, they argue that higher quality is supported when IFRS adopting firms in Germany experience a decline in bid-ask spread of 70 base points, an average 17 more days with price changes per year, and more volatile stock prices for IFRS adopters . Hence, it is evident that for a sample country such as Germany, where there are large differences between the local GAAP and IFRS, there are significant differences in earnings quality observed between the two standards. Nevertheless, given that the evidence based on a single-

country study, it may not be generalized to other jurisdictions. As a result, other studies focus on larger sample sizes to test cross-countries accounting quality.

Using a sample size of 21 countries, Barth et al. (2008) provide evidence that those countries that have adopted IFRS voluntarily perceive a higher quality than those of domestic non-US standards. Accordingly, the study argues that IFRS firms have lower earnings management practices, more timely loss recognition, and more value relevance (i.e., higher association of accounting amounts with share prices and returns) than those matched sample of firms applying non-US domestic standards between the pre- and post-adoption periods. When Barth et al. examine whether the higher quality metrics of accounting is solely attributable to IFRS, they control for such effects as the volatility of economic activity, information environments and incentives by using a matched sample design. Under this approach sample firms that apply domestic standards in the same country are similar to the firms that apply IFRS. Nevertheless, the researchers concede that even with the matched sample design, the study may not fully control for differences in the economic environment because IFRS is also associated with the combined effects of firms' standards, interpretation, enforcement and litigation, and incentives. On the other hand, other studies provide similar empirical evidence that even though IFRS constitutes a relatively higher quality of accounting standards, adopting IFRS alone is not necessary to deliver high quality and consistently applied financial reporting (Ball et al. 2003; Ball, 2006**;** Leuz et al. 2003).).

In opposition to the above results, some studies show that voluntary IFRS adoption does not produce higher quality of accounting information. Inconsistent with the results done by Gassen and Sellhorn (2006) on the higher quality viewpoint in Germany, Hung and Subramanyam (2007) use the same proxy of accounting quality voluntarily adopting IFRS for a period of time, proxy variables (such as the variability of book value and income) are significantly higher under IFRS than under German GAAP (HGB). Also, book value and income are not more relevant under IFRS than under HGB, therefore IAS does not exhibit greater conditional conservatism than German HGB income. Hung and Subramanyam's (2007) findings have been confirmed by Van Tendeloo and Vanstraelen (2005), who study 636 firm-year observations of German firms voluntarily adopted IFRS between 1999 and 2001. In particular, they demonstrate results that IFRS adopters do not exhibit lower earnings management compared to firms reporting under German HGB. Therefore, this implies that IFRS is not necessarily bringing high

accounting quality. Nevertheless, these mixed results may be attributed to the tests that conducted in the transitional period, and sample drawn from a single country (e.g. Germany).

Another study performed by Burgstahler, et al. (2006) gathers evidence from 1997 to 2003 to prove that the extent of managers' discretion depends on firm-specific characteristics (reporting incentives and operating characteristics) when less (more) earnings management in both private and public firms is associated with strong (weak) legal and enforcement systems. But private and public firms respond differently to such institutional factors as book-tax alignment, outside investor protection, and capital market structure.

In summary, research on voluntary IFRS adoption is still at an early stage. Overall results have been inconsistent due to different uses of metrics for earnings management, different sample periods, and different sample countries. As a result, the hypothesis that adoption of IFRS will lead to substantial improvements in accounting quality has not been confirmed.

2.2.2 Economic consequences associated with voluntary IFRS adopting firms' strong reporting incentives

The voluntary switch from local accounting standards to IFRS is a huge commitment by firms, especially if their local GAAP is very different from IFRS. The change includes disclosing substantial new financial and non-financial information to outsiders. Investors should be informed of the decision by firms to voluntarily adopt IFRS, which will have economic consequences which are observable in the capital markets.

Regarding the second question on economic consequences from voluntary IFRS adoption, numerous studies have examined the question of what actual benefits accrue to firms who voluntarily adopt IFRS. The expectation of capital market benefits have been documented by early literature. Zarzeski (1996) conjectures that firms who compete for foreign resources (i.e. dependence) will be more willing to expand their financial and accounting disclosure to reduce the perceived risk to resource providers and accordingly enjoy a lower cost of resources. This concept has been supported by El-Gazzar, et al. (1999) who cites cross-border financing and listing on foreign stock exchanges as major reasons to voluntarily adopt IFRS. The high level of international

market dependency, as expressed by high percentage of foreign sales, low leverage, increasing number of foreign stock exchange listings and membership of the EU are all significant factors for firms to voluntarily adopt international accounting standards. When firms face increasing demands for transparency in financial reports and disclosures, compliance with IFRS can facilitate consistent and reliable comparisons across the international spectrum of GAAPs. Investor confidence in the integrity of IFRS helps firms access more resources internationally at lower costs.

Another metric for economic consequences include improvements in analysis. For instance, Ashbaugh and Pincus (2001) argue that voluntary IAS adoption reduces the cost of information acquisition and improves the accuracy of forecasts. After firms adopt IAS, analysts make fewer forecast errors and there are more news reports for adopter firms in the sample.

However, there is no overall consensus about economic consequences from voluntary IFRS adoption. For instance, Cuijpers and Buijink (2005), with a fairly small sample of 133 non-financial firms listed in the EU in 1999, attempt to test if the firms adopting non-local GAAP enjoy lower levels of information asymmetry. This study proxies' information asymmetry by the number of analysts who follow the company, cost of equity, uncertainty among analysts and investors, and forecast dispersion in stock return volatility. The results are mixed, as for those firms adopting non-local GAAP, there is a positive effect documented on analysts following. However, it fails to find evidence of a lower cost of equity, and also fails to find lower uncertainty among analysts and investors. When comparing early and late adopters, the two researchers conclude that it may take time for both analysts to learn how to interpret financial statements with IFRS or US GAAP, and for firms to comply with the new standards and obtain the benefits.

To proxy and measure specific capital market outcomes associated with voluntary IFRS adoption, such as decreased information asymmetry, prior studies tend to measure directly whether there is a reduction in the cost of equity. However, the following section shows that prior studies on the cost of equity as economic consequences for voluntary adoption provide inconclusive results.

2.2.3. Measure of cost of equity as economic consequences from voluntary IFRS adoption

Concerning the cost of equity estimate, Cujipers and Buijink (2005) use the method of Easton (2004), emphasizing that this calculation does not need to explicitly define a growth rate of abnormal earnings beyond the forecast horizon. Other researchers argue that since there are different opinions about the computation of the ex-ante cost of equity, such as using an average estimate of the four methods in calculating the cost of capital, these affect the results. It is because the four models (i.e. Gebhardt, Lee and Swaminathan, 2001; Claus and Thomas, 2001; Gode and Mohanram, 2003 and PEG ratio, Easton 2004) provide different measures based on different accounting-based representations. This issue is not really significant in influencing the magnitude of change in cost of equity since Kim and Shi (2007) and Hail and Leuz (2006) point out that the cost of equity estimates are highly correlated and similar within a reasonable range.

Daske et al. (2007) examine the cost of equity reduction as a proxy for economic consequences of voluntary IFRS adoptions for 24 countries between 1988 and 2004. They find that, on average, firms which have voluntarily adopted IFRS experience only modestly lower costs of equity. However, when the study partitions voluntary adopters into label adopters firms (i.e. firms which do not have strong reporting incentives) and firms with a serious commitment to IFRS implementation, the researchers finds that only serious adopters have a significantly reduced cost of equity. While Daske et al. contribute to the extant literature that firm-specific commitment is crucial to enhance reporting incentives, it is difficult to justify the proxies of strong (weak) reporting incentives with increase (no increase) in disclosures, as proxied by the additional number of pages of annual reports between pre- and post-adoption period. In fact, the literature argues that an increase in the quantity of disclosures does not mean an increase in their quality (Bauwhede & Willekens, 2008; Botosan, 1997; Botosan & Plumlee, 2002; Botosan & Plumlee, 2005).

On the other hand, when a single country study shows that there is a direct measure of the cost of equity (from several stock valuation models), Daske (2006) fails to find any decrease in the cost of equity. Daske points out that there is a lack of supporting evidence for the proposition that on its own German firms' voluntary adoption of IFRS between 1999 and 2002 leads to significant economic consequences, such as a reduction in the cost of equity. A possible criticism is that the sampling period (just four years) is not a sufficiently long period to capture the effect of a reduced cost of equity from

adopting IFRS. The results also highlight that to collect supporting evidence from testing the effects of IFRS adoption in any reduction in the cost of equity, it is important to control for other factors, such as different reporting incentives.

Instead of directly calculating the cost of equity as a proxy for economic consequences, economic theories also link the cost of equity effect between the bid-ask spread and information asymmetry. For instance, Verecchia (2001) and Glosten and Milgrom (1985) develop the conceptual link between corporate disclosure and market liquidity from the theoretical underpinning that the share price contains elements of adverse selection from information asymmetry. In fact, compared to privately or better informed counter-parties in the stock markets, uninformed or less informed investors have concerns about unfair dealings by informed investors. Therefore, they will try to protect their interests by selling (buying) by lowering (increasing) the price more than what they are willing to buy (sell). This consequence of price-protection is reflected in a wider bid-ask spread. In addition, Leuz and Verrecchia (2000) proxy the change in the cost of capital by measuring bid-ask spreads and stock turnover ratios (as liquidity changes), because they argue that opaque information environments will reduce the demand for stocks which will result in increasing bid-ask spreads and lower stock turnover ratios. Given this, in order to attract potential investors, firms with low financial reporting quality have to sell their shares at lower prices, which in turn will be affected by the higher cost of equity . The bid-ask spread and turnover ratios is also used by Diamond and Verrecchia, (1991). After controlling for the self-selection bias in their sample, Leuz and Verrecchia (2000) empirically document that firms voluntarily adopting IFRS or US GAAP have higher stock turnover ratios and lower bid-ask spreads.

According to Hail and Leuz (2006), firms' adoption strategies are driven by reporting incentives, and must be considered in accounting for any economic effects of switching to IFRS, especially when there is evidence that voluntary IFRS adoption is perceived to have more benefits than costs (e.g. Ball, 2006; Barth et al., 2008).

Overall, a number of empirical studies suggest a relationship between voluntary IFRS adoption and the expectation of capital market benefits. However, the direct link between voluntary IFRS adoption and actual capital market benefits is mixed. It may suggest that firms that voluntarily adopt IFRS appear to have strong reporting

incentives. However, Daske et al. (2007) point out that some voluntary adopting firms may just be following others without actually having reporting incentives. It is possible that there are voluntary adopters without reporting incentives are looking for certain bonding benefits arising from voluntary IFRS adoption (Daske et al., 2007). In other words, those firms adopting IFRS voluntarily but only cosmetically believe that their voluntary adoption can mimic other adopting firms with strong reporting incentives. These mimicking firms believe that such willingness to adopt IFRS voluntarily will signal their transparency to capital markets and, as a consequence, they will receive capital market benefits. However, if the financial reports are not prepared in accordance with IFRS requirements, the quality will not improve. As a result, those firms without strong reporting incentives will not receive capital market benefits. Therefore, in voluntary IFRS adoption, the benefits are not uniformly distributed to all adopting firms because some firms are highly committed to adopting IFRS while others are not. Therefore, voluntary IFRS adoption may actually have differential capital market benefits, depending on whether adopters have reporting incentives (Daske et al., 2007). Thus, studies that measure economic consequences from all adopting firms without controlling for reporting incentives will produce inconclusive results.

It is Rahman et al. (2002) view that even though IFRS may provide a good influence, and potentially produce high quality output, firms who expect capital market benefits and have actual reporting incentives must commit to the process. This process should produce high quality financial reports as outputs which are well received by investors who may respond positively with better outcome in capital markets. This argument has been further supported by Daske (2006) who argues that IFRS adoption alone may not produce discernible economic consequences, and therefore future research should address the potential cost of the equity reducing effect from variations between firms' adopting strategy, and its corporate governance and ownership structure, as well as explore the structures in institutions both within and across countries and jurisdictions.

2.3 Mandatory IFRS Adoption

Since January 1st, 2005, firms in the EU have been required to adopt IFRS[8]. Therefore, the literature in IFRS studies turns its attention to examining the two empirical

[8] On June 6th 2002, the Council of Ministers of the EU issued an official statement to require that all publicly listed companies in the EU to adopt International Accounting Standards (IAS) in their consolidated or simple accounts for the fiscal year beginning January 1st 2005 (Soderstrom and Sun, 2007)

questions in this mandated setting. First, when voluntary IFRS adoption cannot support the higher quality viewpoint, is it different when there is mandatory IFRS adoption? Second, while voluntary IFRS adopters may have higher expectations of capital market benefits and stronger reporting incentives, is this the case for mandatory IFRS adopters? Hail and Leuz (2007) point out that the empirical evidence supported by voluntary adoption cannot be directly transferred to mandatory adoption, because voluntary adopting firms seem to have more incentives to implement the new standards. Moreover, when all firms implement IFRS, the accompanying effects from bonding and network will no longer apply to firms' signaling their commitment to transparency to the capital markets (Coffee, 2002). Therefore, mandatory IFRS adopters may find it challenging to realize higher accounting quality or economic consequences without a strong reporting incentive.

In addition to the difference in reporting incentives, institutional environments also differ. In supporting mandatory IFRS adoption, jurisdictions have been improving their legal enforcement, investor protections and other institutional factors (Daske et al. 2007). Accounting scholars have found evidence of an association between institutional effect and firms' reporting incentives, leading to differential capital market consequences. In addition, accounting scandals in recent years show the urgent need for both firm directors and national regulators to strengthen corporate governance mechanisms.

Subsequent to the mandatory date for adopting IFRS, researchers have been gathering empirical evidence to determine the validity of the high quality and incentive viewpoints, as well as any economic consequences resulting from mandatory IFRS adoption.

2.4 Accounting Standard view: Mandatory IFRS Adoption results in High Quality of Accounting Information

Proponents for the view that higher accounting quality can be derived from accounting standards claim that overall it will benefit stakeholders in two ways. The first way is primarily related to IFRS convergence benefits that:

- Disclosing more relevant information about the economic performance and positions of entities will make financial reporting more transparent; and

- Enhance financial information comparability and reduce the cost of preparing and comparing multi-national business financial reports.

The second benefit is that mandatory IFRS adoption requires greater financial disclosure and transparency than most domestic accounting standards (Aksu, 2006; Ashbaugh & Pincus, 2001; Bae et al., 2007; Daske & Gebhardt, 2006) This will translate into higher quality accounting information.

However, opponents express serious concern about the inherent flexibility in principles-based standards and that mandatory IFRS may give managers too much room to make judgment calls in its application. For instance, Sunder (2009) is concerned that the underlying differences in business, industry and country level may further complicate the interpretations of IFRS principles, giving rise to greater variability in international financial reporting, instead of comparability. In addition, it may also create greater opportunities for managers to exercise their earnings management techniques. Switching from a rules-based to principle-based set of standards may allow various manipulations in financial position and performance measurement, with the consequence that accounting quality will be reduced by adopting IFRS. Therefore, whether mandatory IFRS adoption will bring in higher quality of accounting information becomes an empirical question for research studies. There has been a wave of literature examining the impact of mandatory IFRS adoption since 2005.

On the negative side, Beuselinck et al. (2009) argue that accounting quality does not improve by mandatory IFRS adoption. In particular, Beuselinck et al. (2009) use comparability as a proxy for accounting quality, and provide evidence that even though 14 EU countries have used IFRS since 2005, the earnings comparability, proxied by accruals-cash flows association, across Europe does not improve. Instead, their research findings suggest that earnings comparability is influenced by business cycles and firm-specific reporting incentives, not the accounting standards per se.

In terms of proxies of accounting quality by earnings management for targets, timely loss recognition, and value relevance (similar to Barth et al., 2008), Paananen (2008) perform empirical tests for sample firms drawn from Sweden and claims that accounting quality not only does not improve, but even decreases after the mandatory IFRS

adoption. However, this study provides evidence based on a single-country study with only one year's data following the mandatory adoption period.

Instead of using a one-country sample, Ahmed et al. (2009) compare several accounting quality metrics for firms between the pre- (2002 to 2004) and post-mandatory (2005 to 2007) periods. One sample consists of more than 1,600 IFRS adopting firms in 21 countries, while the other sample is drawn from firms from 17 countries that have not adopted IFRS. The researchers conclude that mandatory IFRS does not translate into an improvement in overall accounting quality. They find that firms have an increase in income smoothing, a decrease in the asymmetric timeliness of loss recognition in the post adoption period for the IFRS adopters compared to the non-adopter sample. In addition, the reporting conservatism practices do not improve after the mandatory IFRS adoption when the timelines for bad news recognition has decreased, but for good news recognition has increased. To address country and institutional effects, Ahmed et al. (2009) proxy the strength of (i) legal system by the Rule of Law scores from Kaufman et al. (2007); and (ii) reporting incentives by the private control benefits (PCB) scores from Dyck and Zingales (2004 A problem with their paper is that the measurement metrics for both legal strength and reporting incentives are neither conceptually correct nor comprehensive in scope.

Dobler (2008) conjectures that when the German local accounting standard (HGB) has been converted into IFRS, earnings management practices do not necessarily decrease. Following the same argument, Aussenegg et al. (2008) also argue that accounting quality does not improve when earning management practices do not change. Their study tests and documents evidence from using comprehensive earnings management metrics (15 different proxies in measuring earnings management) in 17 European countries using more than 18,000 firm-year observations. However, the study only focuses on the transitional period for countries adopting IFRS. It is possible that the effect of unchanged earnings management could be short-term only and will change as IFRS becomes embedded over time.

On the other hand, there are studies that show mixed results in accounting quality when mandatory adoption takes place. Guenther et al. (2009a) use Germany as a single-country study on the relation between IFRS and earnings quality. They conclude that the tested results of earnings management proxies such as a decrease in income smoothing

have been recorded by voluntary, but not for mandatory IFRS adopters. They present results showing no decrease in discretionary accruals under voluntary; but decreases for mandatory IFRS adopting firms. Thus, empirical results concerning accounting quality have been mixed when comparing voluntary and mandatory IFRS adopters in Germany.

A paper by Guenther et al. (2009b), who use the sample period from 1998 to 2008, examines the relative accounting quality between voluntary and mandatory adoption. They report ambiguous evidence on earnings management when income smoothing effect decreases, and conditional conservatism increases under voluntary, but not under mandatory adopters. For discretionary accruals, mandatory adopters exhibit some decreases, but not voluntary adopters. While they try to overcome the common issue of a limited time period (from 2005 to 2007), the study only uses Germany data, which implies that their empirical results may be unique to the German setting rather than generalizable to a wider diverse institutional environment like the EU.

Chen et al. (2009) find that using the five most important indicators to proxy earnings management to measure 15 European Union countries before and after the full adoption of IFRS produces mixed results, even though the overall accounting quality has been marginally improved. They comment that with IFRS adoption, opportunistic behavior may be restricted, but it does not imply any reduction in incentives to manage earnings. Merely changing the accounting standards will not necessarily enhance higher accounting quality. If IFRS cannot bring along capital market benefits to investors, transparency of financial information through accounting numbers is still weak due to the lack of sufficient disclosure, and financial reports would not reflect the firms' economic performance and position accurately.

Using incremental value relevance as another metric of accounting quality, Gordon et al. (2008) examine a sample of 83 cross-listed firms to analyze the associated effects of firms' earnings as reported by local GAAP, IFRS and US GAAP with stock returns to firms' operating cash flows before (2004) and after (2005) the mandatory adoption of IFRS. In 2004, local GAAP earnings and accruals recorded the highest explanatory power for stock returns. In 2005, after mandatory IFRS adoption, the reconciliation between U.S. GAAP and IFRS suggests that U.S. GAAP exhibit both incremental and relative value relevance, while IFRS-reconciled earnings show only incremental value relevance. ,.The researchers argue that even earnings attributes are comparable under

both U.S. GAAP and IFRS, IFRS does not produce higher quality of financial information.

Following the Barth et al. (2008) study of accounting quality with voluntary adoption in using US firms as the matched samples; Giner and Iniguez (2007) examine and compare the earnings quality of 119 cross-listed firms in the US reporting IFRS in the EU. When the earnings quality proxies are used as per prior studies (Lang et al., 2006a; Lang et al., 2006b; Leuz et al., 2003), Giner and Iniguez (2007) could not measure any identified differences in earnings quality between IFRS and US GAAP, but the results appear to be preliminary and suggestive due to data limitations.

However, given different opinions concerning the accounting quality in the literature, recent studies have sought to extend the quality of the analysis. Chen et al. (2010) examine five proxies for accounting qualities for the EU, comparing the pre- and post-mandatory periods and conclude that most of the accounting quality indicators improved after the mandatory adoption of IFRS in 2005. Specifically, accounting quality is higher when researchers can measure significantly less targeted earnings management, lower magnitude of absolute discretionary accruals, and higher accruals quality. Another study performed by Chen et al. (2009) measures the mean scores of six indices from institutional environments, (namely, regulatory quality index (RQI), rule of law index (RLI), control of corruption index (CCI), voice and accountability index (VAI), political stability and absence of violence index (PVI), and government effectiveness index (GEI)) to proxy financial reporting environment associated with managerial incentives. In the post- (2005 to 2007) relative to the pre-adoption (2000 to 2004) period, they do not find any statistically significant differences, implying that improvement in accounting quality is not associated with any improvement in managerial incentives from mandatory IFRS adoption. While data availability is improved and measurements on earnings managements have been more comprehensive in this study, it is questionable if it is theoretically sound to use these six macro-level indices (similar to legal enforcement characteristics) to proxy managerial incentive, and to draw any empirical conclusion when firm-specific characteristics are totally ignored.

Horton, et al. (2008) examine the effects of mandatory IFRS on firms' information environments, represented by analyst forecast accuracy (proxied by the accuracy of analyst forecasts, number of analysts following, dispersion of forecasts and volatility of

revisions) by comparing between voluntary adopters, mandatory adopters and non-adopters. This study provides evidence on improvements in information environments for non-financial firms. Besides the study by Horton et al. (2008), other value-relevance studies defending the higher quality view produce different results. Morais and Curto (2007) argue that financial reporting under mandatory IFRS adoption increases the value relevance of accounting numbers of EU firms. Their finding is further supported by Bellas et al. (2007) who document evidence that compared to earnings prepared by Greek GAAP, IFRS earnings have higher value relevance.

Similar to studies for voluntary IFRS adoption, prior empirical results of mandatory IFRS adoption still need more work because the extant literature is limited by its sample size and the data available. For instance, Christensen et al. (2008) examine if there is less income smoothing, and more timely loss recognition for both voluntary and mandatory IFRS adopters. The study concludes that voluntary IFRS adopters have higher incentives than mandatory adopters, and therefore dominate the effect of accounting standards in determining accounting quality. However, this study only covers Germany from 1993 to 2006, with mostly voluntary adopters and only a few mandatory firms in the sample. Meanwhile, when Perramon and Amat (2006) argue that IFRS adoption would be costly for German companies domiciled in code-law regimes, it is possible that any significant economic consequences and improvements in accounting quality from such relatively weak legal and investor protection mechanisms will not be material in the preliminary transition period. This learning curve effect for some countries adopting IFRS is also supported by other literature (Cuijpers and Buijink, 2005). In other words, empirical conclusions drawn from evidence gathered around the transition period of IFRS adoption is not necessarily going to be conclusive, suggesting that more time post adoption is needed to give meaningful results.
In summary, most prior studies do not support the view that higher accounting quality is associated with mandatory IFRS adoption. Some studies have mixed results while others conclude that there should be a link. Overall, the empirical studies with accounting quality effects from mandatory IFRS adoption are still inconclusive (Daske et al., 2007), and are probably confined to measuring the transition effect with the limited data available (i.e. with only one or two years following mandatory adoption) and have a limited sample size. As the mixed and inconclusive empirical results of mandatory IFRS adoption suffer the same issues as voluntary IFRS adoption, the present research applies the IPOO model to test whether the influence of IFRS adoption

alone s can produce higher quality accounting output. As it is possible that reporting incentives influence the process of adoption of accounting standard; which ultimately determines the accounting quality that lead to better outcome this will be a major area of examination.

Several prior studies try to address whether reporting incentives play a role in mandatory IFRS adoption to influence managers' commitment in the process and receive desirable outcomes from the capital market. However, what differs from the voluntary IFRS adoption stage is that researchers begin to understand by consensus that, equivalent to the IPOO model by Rahman et al. (2002), that maybe the influence component is more than just mandatory IFRS. Other importance influences may also have an effect on managers' incentives in mandatory reporting. In other words, IFRS adoption alone is not sufficient, but requires other significant factors to enhance reporting incentives, which in turn determine whether there are discernible economic consequences (outcomes). In the following section, the literature on reporting incentives in IFRS adoption will be discussed.

2.5 Incentive View: Economic consequences of mandatory IFRS adoption driven by reporting incentives

Prior studies (Hail & Leuz, 2006) recognize that IFRS, being a principle-based accounting rule, provides managers with substantial discretion to influence information about earnings, but this private incentive cannot be observed directly. Incentive-view proponents contend that IFRS involves a considerable level of managerial judgment and the use of private information (e.g., in exercising the fair values versus impairment of goodwill, and property, plant and equipment). To what extent firms apply this discretionary judgment into their IFRS adoption and disclosure strategy likely depends on their reporting incentives, which are shaped by many factors (Daske et al., 2008).

Moreover, Krivogorsky, Chang and Black (2010) argue that as long as firms can recognize that the potential benefits of adopting IFRS will outweigh the costs of adoption and compliance, more firms and countries will use IFRS as their international reporting strategy. According to economic theory, the network effect will expand these net benefits to more participants. As more and more players participate, more firms will gain more benefits. However, receiving the net benefits depends on the firms having strong commitment incentives to convergence to IFRS. Therefore, researchers like Ball,

Robin, and Wu (2003), Burgstahler, et al. (2006), Cairns (1999), and Street and Gray (2001), document evidence that there are substantial non-compliances with IFRS among firms who have purportedly adopted IFRS. It highlights the fact that because some firms adopting IFRS do not have the reporting incentives to do so, it is possible that mandatory IFRS adoption may not lead to uniform quality of accounting reports across firms.

Recent literature shows that high quality accounting standards do not automatically lead to improvements in high quality accounting practices (Ball et al., 2003, and Beuselinck et al., 2009). In fact, there are other possible key firm and institutional variables essential for IFRS to be beneficial to adopting firms. So, the relevant empirical question becomes: what factors drive incentives for firms to strategically adopt, and make a strong commitment in mandatory adoption of IFRS to achieving the expected economic benefits, if any?

If the incentive-view is valid for mandatory IFRS adoption, any capital market benefits to firms will be unevenly distributed and dependent upon the firms' reporting incentives in exercising their transparency and disclosure strategy. In this regard, Daske et al. (2008) study the economic consequences of mandatory IFRS adoption in 26 countries. On the one hand, these researchers find that market liquidity (as proxied by calculating the bid-ask spreads of common shares) improves around the mandatory IFRS adoption period. On the other hand, a decrease in the cost of capital and increase in equity valuations (proxied by an increase in Tobin q) do not take effect unless firms have strong incentives to be transparent, and countries have concurrently improved the respective legal enforcement and government regimes. This study provides a convincing case that both firm-specific factors and institutional environments provide strong incentives to transparency, similar to many European Union efforts to improve governance and enforcement, without which adopting IFRS simply replaces one set of standards with another (Hail & Leuz, 2007).

Christensen et al. (2007) study the economic consequences for UK firms in mandatorily adopting IFRS in 2005. Using the variables of voluntary adopting firms in Germany as the proxy for UK firms' willingness to adopt IFRS, this study empirically proves that the intended proxy of commitment to adopt IFRS in Germany predicts cross-sectional differences in both the short-run market reactions and the long-run changes in the cost

of equity of U.K. The results suggest that mandatory IFRS adoption does not benefit all firms in a uniform way, but results in relative winners and losers. This study notes that where the literature generally suggests that the relative reductions in cost of capital are associated with the quality of the legal framework, in fact, firm-specific factors of reporting incentives (i.e., willingness and commitments to adopt IFRS) can explain some of the relative benefits.

In addition, even though Daske et al. (2007) do not find any significant changes in the cost of equity for mandatory IFRS adoption, firms with higher reporting incentives have a significantly lower cost of equity than those firms with lower reporting incentives.

While a single-country study does not provide conclusive empirical support for the incentive-view, the extant literature following mandatory IFRS adoption has in turn focused on testing samples from a cross-country perspective. Some of these studies document positive economic consequences; however, others have given mixed results. For instance, Daske et al. (2008) examine a variety of economic implications for 26 countries (18 are in the European Union) following the mandatory adoption of IFRS for the period between 2001 and 2005, but find mixed evidence on the effect of cost of equity. Similar research conducted over a longer time may find different results but when Li (2010) undertakes identical research covering an two additional years (i.e., 2005 and 2006), Daske et al extends only until 2005, Li documents a significantly lower cost of equity for mandatory adopters (48 basis points) when comparing to the pre-adoption period (1995 to 2004). Consistent with the finding of short-lived benefits for voluntary IFRS adopters, Li (2010) provides evidence that voluntary adopters could benefit from a lower cost of equity compared to mandatory adopters, but only in the pre-mandatory adoption period, and this difference becomes insignificant after mandatory adoption. In fact, voluntary adopters experience no significant change in the cost of equity after the mandatory period. However, it should be noted that Li's study covers only a two-year post-mandatory period. A longer period following the transition might provide different results. Also, Li (2010) finds that the reduced cost of equity is present only in jurisdictions with strong legal enforcement, increased disclosures and better information comparability.

Overall, while there is growing conjecture that mandatory IFRS adoption alone does not contribute to significant capital markets effects, it is apparent from the empirical evidence of prior studies that the incentive-view may be more convincing than the quality-view. However it is still too early to assess the negative link between reporting incentive effects and the cost of equity, since there is, as yet, no strong consensus. To gain a better understanding about the determinants and consequences of reporting incentives and the relationship to the cost of equity comprehensively, it is useful to consider reporting incentives as the "Influences" of the IPOO model (Rahman et al. 2002). In the next section the literature on the roles of institutional-specific (macro) factors, firm-specific (micro) characteristics in both business and corporate governances, and their joint effects to any association with subsequent capital market consequences is reviewed.

2.5.1 The roles of Institutional Environment Factors (IEF)

With regard to the association between institutional factors and financial reporting, in their pioneering study La Porta et al. (1998) explore the link between a country's legal system and financial information quality. La Porta et al. argue that common law countries, on average, have better accounting systems and better investor protection structures than code law countries. Since then, there have been numerous studies on the association between financial reporting quality and other institutional factors such as tax systems, ownership structures, political system, and capital structure, and capital market development (Ali &Hwang, 2000; Ball & Shivakuman, 2005; Burgstahler et al., 2006; Fan & Wong, 2002; Guenther & Young, 2000; Leuz & Oberholzer-Gee, 2006; Sun, 2006). The new institutional environment approach makes the point that such external factors can affect firms' reporting and disclosure practices regardless of the accounting standards (Ball et al., 2000; Fan & Wong, 2002; Leuz et al., 2003).

The extant literature shows that strong laws protecting investors as well as extensive corporate governance recommendations may shape incentives in a firm's decision to adopt IFRS. For instance, Renders and Gaeremynck (2005) have found that adopting IFRS requires substantial corporate disclosures with fewer accounting choices, and information between management and shareholders becomes less asymmetrical than when using the local GAAP. This results in less opportunity for insider trading at the expense of the shareholders. However, the extent of private benefits that insiders relinquish due to the IFRS adoption depends on the level of investor protection offered

by countries. If the countries have strong investor protection laws in place, managers will not have much room for accounting manipulations, therefore, IFRS does not result in huge losses in private benefits. Thus, the European companies most likely to have adopted IFRS are those in countries with strong investor protection and /or extensive corporate governance recommendations. However, countries with weak investor protections will have less incentive to adopt IFRS.

Even though a firm's institutional environment may influence reporting incentives in adopting IFRS, strong institutions could reduce the risk premium demanded by investors, and subsequently have a lower cost of equity than weak institutions. For instance, after controlling for various risk and country factors, Hail and Leuz (2006) employ a cross-sectional sample of 40 countries to examine the impacts of legal institutions and securities regulations in the firms' cost of equity, and conclude that countries with extensive securities regulation and strong enforcement mechanisms experience lower levels of cost of equity than those with weak institutional settings. Together, Hail and Leuz provide evidence of about 60% for country-level and close to 40% for firm-level variation in the significantly lower implied cost of equity for higher legal institutions around the world. In spite of the significantly negative relationship between legal and securities regulations and implied cost of equity, Hail and Leuz (2006) also indicate that these effects are small, and even become insignificant with the degree of integration in capital markets.

The important role of the legal system has been further highlighted by a study by Bushman and Piotroski (2006) which explores the extent to which financial reporting is influenced by an economy's institutional environment. Specifically, factors such as a country's legal and judicial system, securities laws and political economy act as incentives to influence corporate executives, investors, regulators and other market participants, especially with regard to reported accounting numbers (which are proxied by conditional accounting conservatism). To stress the significance of legal systems, Bushman and Piotroski show that firms in countries with high quality judicial systems will reflect bad news in reported earnings faster than firms domiciled in low quality judicial regimes. These conservative accounting and disclosure practices will be similar in nations with traditions of strong public enforcement, low risk of expropriation, and little state ownership of businesses.

Other studies show that institutional environment factors also influence reporting incentives in financial reporting (Ali and Hwang, 2000; Ball et al., 2000; Ball et al., 2003; Joos and Lang, 1994; Leuz et al., 2003). For instance, Burgstahler, et al. (2006) provide evidence that there are fewer (more) earnings management practices in their sample of firms that are associated with strong (weak) legal systems. The study highlights the importance of capital market pressures and institutional factors in influencing incentives in reporting earnings that in turn reflect economic performance. Regarding the joint effects from both institutional and firm-specific factors, Burgstahler et al. argue that, while private and public firms respond differently to some institutional factors such as investor protection, there is evidence that legal institutions and capital market forces always seem to have a reinforcement effect on each other.

Ball et al. (2003) further emphasize the link between incentives and institutions by arguing that common law countries are more effective than code law countries in shaping reporting incentives, and preparing high quality accounting reports regardless of their accounting standards. Their study examines firms from Hong Kong, Malaysia, Singapore, and Thailand to study the factors that determine recognition of timing loss (as proxy for accounting quality). The study shows that even though the accounting standards for these countries derived from the common law system and therefore are similar to IAS, the accounting quality of such financial reporting is no better than it is for firms in code law countries, mainly because of the differing incentives for firms and auditors. Ball, et al. (2003) point out that to produce high quality financial reports from high quality accounting standards, proper incentives must be in place as well. More importantly, this study supports the pro-incentive view to argue that high quality accounting standards do not guarantee high quality accounting practices. However, the question is whether using timely recognition of economics losses as proxy for accounting quality is sufficient to draw this conclusion. Also, the division of institutional structures simply by classifying them into common-law and code-law countries appears to be too broad. In addition, Ball et al. (2003) also ignore the possible significance of inter-dependencies and inter-relatedness between firm-specific and institutional factors that may lead to different financial reporting output quality (Wysocki, 2010).

Moreover, Lang et al. (2006b) compare the properties of US GAAP accounting numbers across cross-listed and US firms, demonstrating that cross-listed firms' accounting numbers are not comparable. The study provides evidence to show more earnings management practices, less timely loss recognition, and lower value relevance than US firms even though cross-listed firms use the same high quality accounting standards as US firms. The study concludes that this is mainly because cross-listed firms have relatively weaker investor protection mechanisms.

Leuz (2006) extends the study by Lang, et al. (2006b) by investigating the reasons for the incomparability between cross-listed and US firms. Leuz conjectures that accounting standards provide discretion, and that cross-listed and US firms are likely to have differential incentives to use this discretion. The driver for incentives, according to Leuz, is the more concentrated ownership for the cross-listed firms compared to US firms (which make market discipline a weak force for ensuring firms' high quality financial reporting) even with a higher level of legal enforcement. As a result, these variations are associated with the level of earnings management in the home country of cross-listed firms. In addition, Leuz (2006) also documents evidence that home-country institutions continue to affect cross-listed firms' reporting practices. Finally, Leuz (2006) points out the need for further research to explore the interactions between market forces and institutional factors in shaping firms' reporting incentives.

Earlier studies have established a positive link between institutional environment factors and reporting incentives, which influence the accounting information quality or the cost of equity. However, compared to firm-specific characteristics that have an effect on reporting incentives, institutional environments–such as law enforcement and securities regulations–prevent firms from shirking, not encouraging, reporting incentives in mandatory IFS adoption. It is possible that firm-specific factors such as profitability and size motivate firms to earn expected capital market benefits from mandatory IFRS adoption. In other words, it may be that firm-specific factors have a direct effect, while institution environment factors have indirect effects in shaping reporting incentives along with mandatory IFRS adoption. Thus, to understand reporting incentives, it is important to examine both firm- and institutional environments and how they interact.

2.5.2 Institutional Environment Factors are becoming more integrated along with IFRS adoption

Recently, countries which support IFRS adoption have integrated their capital market operations and development to achieve more economies of scale and cost saving benefits. This effect may mitigate the influences of institutional environment on firms' reporting incentives. For instance, Hail and Leuz (2006) argue that firms from countries with more extensive disclosure requirements, stronger securities regulation, and stricter enforcement mechanisms have a significantly lower cost of capital. However, it is possible that such a negative association becomes statistically insignificant as capital markets become more integrated (Hail and Leuz, 2006). Nevertheless, the measurement metrics of integration between countries by measuring the Morgan Stanley Capital International (MSCI) and portfolio flows across different EU countries may not be comprehensive and theoretically sound enough. Thus, the literature contends that measuring the integrity of many countries' different institutional environment within a particular region like EU is not easy.

On the contrary, Schipper (2005) explains that while the quality of financial reporting depends on the vigor of enforcement, the EU has been upgrading its regulatory power for implementing IFRS since 2005. In fact, efforts are underway to increase the cross-jurisdictional consistency of securities regulation and financial reporting enforcement. For instance, the Committee of European Securities Regulators (CESR) and European Enforcement Coordination (EEC) were created to strengthen coordination, with the goal of harmonizing regulatory practices. As a result, the institutional environment in EU should strengthen the negative association between the stronger IEF and the cost of equity during the post-mandatory period.

There are thus two conflicting views about the importance of institutional environments in affecting firms' reporting incentives along with mandatory IFRS adoption. My view is that, due to the lack of reliable measurement metrics, the integrity of capital markets in the EU still needs to be determined. However, institutional environment factors in the EU, such as enforcement mechanisms, have improved with mandatory IFRS adoption. With mandatory IFRS adoption, capital market consequences such as lower cost of equity in EU will continue to improve.

While institutional environment is an important influence in the IPOO model (Rahman et al., 2002), does it mean that mandatory IFRS adoption in a weak (strong) institutional environment alone will receive few or none of (large) capital market benefits? Earlier studies argue that if there are other substitute effects to strengthen the overall reporting incentive in the process of mandatory IFRS adoption for weak institution, firms may still receive desirable outcomes.

2.5.3 Firm's strong incentives for IFRS adoption to substitute weak institutional environment

For countries with relatively weaker investor protections and securities regulations, prior studies demonstrate that, consistent with bonding theory, weaker institutional environments are more likely to adopt IFRS than stronger legal and investor protection countries in order to switch to higher level financial reporting standards like IFRS (Hope et al. 2006, Kim & Shi, 2007). As a result, those countries' weak institutional mechanisms can be greatly improved. Also, signaling theory (Spence, 1993) holds true for countries. These are more likely to adopt IFRS voluntarily when firms, attempting to raise equity financing make their capital markets more accessible to overseas investors by opening up their equity markets, commit to better financial reporting and disclosures. In particular, Hope et al. (2006) argue that even countries with weaker investor protection mechanisms are more likely to adopt IFRS, as they will be perceived to be improving investor protection, and thereby making their capital markets more accessible to foreign investors.

Bonding theory (Coffee, 2002) suggests that cross listing on a U.S. exchange motivates the listing firms to provide better and greater financial reporting and disclosure practices, suggesting that firms with strong reporting incentives and weak institutional environments may still benefit from a capital market effect. This hypothesis has been supported by recent empirical studies (Doidge, Karolyi, & Stulz, 2004; Hail & Leuz, 2006; Lang, Lins and Miller, 2003a; Reese & Weisbach, 2002) arguing that cross-listings behavior by foreign firms (with relatively less strict legal enforcement and investor protection mechanisms) in the U.S. (with stronger institutional environments than foreign firms' local regimes) experience more external equity financing, higher valuations, lower cost of capital and more critical oversight than their foreign counterparts.

Contrary to the Ball et al. (2003) argument that the institutional environment is more important in shaping reporting incentives, the literature highlights the importance of firm-specific governance as a substitute for legal and investor protection in IFRS adoption. For instance, Renders and Gaeremynck (2005) argue that voluntary adoption of IFRS is costly for company insiders, as there is then less managerial discretion. However, this study also shows that the costs of such private benefits by company insiders can be mitigated by both extensive disclosures of IFRS and institution structures such as a high level of jurisdiction's investor protection (proxied by La Porta et al., 1998). As a result, IFRS is more likely to be adopted in countries with strong laws protecting investors and/or extensive corporate governance mechanisms (proxied by OECD CG principles). In other words, improving corporate governance codes can provide effective legal and investor protections to support IFRS adoption in countries with weak legal settings.

Kim and Shi (2007) conduct a comprehensive examination for a large multi-period sample of 34 countries to test if the cost of equity has been reduced by voluntary IFRS adoption. The researchers have two important findings: First, they use non-IFRS adopting countries as the control group, and find that the cost of equity is significantly lower for the full IFRS adopting countries than for non-adopting countries, implying that IFRS benefits adopting countries from greater and better disclosures by reducing the cost of equity. This result holds true regardless of a country's institutional factors (similar to Francis et al. 2005). Second, for countries with weak institutional environments (such as emerging markets), the cost of the capital-reducing effect from IFRS adoption is greater than for countries with strong environments.

Following this line of logic, Bova and Pereira, (2009) and Fekete et al. (2008) base their empirical studies on firms in developing countries like Kenya, Turkey, Spain and Hungary. Under weaker investor protection and other legal institutional mechanisms, firms are actually more likely to adopt IFRS with great commitment because the perceived higher quality of accounting standards can improve investor protection and enhance the accessibility of foreign capital for local emerging markets.

However, there are conflicting views from other studies arguing that in less developed countries, country-specific factors (instead of firm-specific) are more important in IFRS adoption. Francis et al. (2008) test two logistic models of multivariate regression (one

for firm-level and the other for country-level) on a large sample of 52 countries with a broad base of proxies using six country-factors (proxied by GDP, common or code law, level of financial development, strength of legal enforcement, judiciary function, corruption and general financing constraints). This study focuses on small and medium-sized private enterprises, arguing that unlike large public firms which are subject to agency problems, smaller enterprises adopting IFRS are subject to contracting incentives, which are influenced by both firm-specific and country factors. They provide evidence that both firm-level (proxied by investment growth opportunity, external financing, foreign ownership, export sales and firm size) and country factors are important in influencing the decision to voluntarily adopt IFRS. However, when the samples are partitioned by the level of economic development, the researchers find that for more developed countries, firm factors dominate country factors. The reverse is true in less developed countries. The empirical results may be useful, but the setting is mainly applied to small and medium-sized private enterprises in a relatively large sample of 52 countries using only a small number of proxies. In fact, there are many variations of country-specific factors among those countries that Francis et al. do not control for.

Even though the study by Francis et al. (2008) provides evidence that in less developed countries, country factors will dominate firm-specific factors, Holthausen (2003) argues that in IFRS research it is necessary to control for institutional variables in a single country. Lopes and Walker (2008) study the association between firm-level incentives in Brazil, which has poor accounting quality, code law legal tradition, and less-developed capital markets, and come up with different conclusions from Francis et al. (2008). In particular, due to the significant investment growth opportunities and cross-listing characteristics of Brazil firms that need more external funds, Brazilian firms are motivated to strive for firm-level improvements voluntarily in both corporate governance practices (measured by higher scores in the Brazilian Corporate Governance Index – BCGI) and higher quality financial reporting .In other words, Lopes and Walker (2008) prove that strong firm-specific incentives take over even in weak institutional environments, and produce high quality financial reports with superior governance in less developed countries like Brazil.

Therefore, such firm-specific factors, such as high demand for invested capital for growth, may provide strong incentives for implementing IFRS adoption in developing countries, even those with weak institutions and a lack of resources and financial infrastructure. As a result, firms can provide high quality financial reports, because of the strong firm-based incentives. This rationale is further supported by Bova and Pereira (2009) who examine the effect of IFRS compliance by Kenya's public firms. Because public firms have widely dispersed shares, shareholders need high quality financial reports to reduce information asymmetry between shareholders and managers in order to limit agency conflicts through transparent financial communications (Barth et al., 2009; Bushman & Smith, 2003). Using a sample from a developing country like Kenya, Bova and Pereira (2009) document evidence that the economic benefits that public firms (especially those with greater foreign ownership) expect from the capital markets will provide strong incentives to adopt IFRS with a high level of compliance despite low legal protection. However, aside from foreign ownership and leverage, Bova and Pereira do not look into firms' heterogeneity in business factors or characteristics in relation to the level of IFRS compliance, even though such factors may have given more insight into the firms' internal demand for IFRS adoption.

These studies demonstrate that firm-specific motivations can shape IFRS compliance despite factors such as weak legal and investor protection. This reinforces the view in section 3.4.1 that in the IPOO concept (Rahman et al., 2002) certain favorable firm-specific characteristics will be effective in motivating reporting incentives in mandatory IFRS adoption, even in a relatively weak institutional environment. Even though influence from an institutional environment is not strong enough to enforce reporting incentive, firm-specific factors can influence managers to produce a high quality accounting output with the expectation of desirable outcome from the capital markets. To accomplish this, Bova and Pereira (2009) and Lopes and Walker (2008) point out that firms' (internal) corporate governance mechanisms have been greatly improved[9]. However, few studies systematically investigate these dynamic effects between (internal) corporate governance and mandatory IFRS adoption. If (internal) corporate

[9] Corporate governance, according to the academic sources, can be classified into internal and external. Internal (external) corporate governance refers to firms' boards of directors'(national regulators) mechanisms to regulate, manage and control managers' behavior in order to mitigate agency problems. Thus, internal corporate governance is responsible by the board of directors and external corporate governance is actually similar to a country's institutional environments such as securities regulations and law enforcements. This study finds that some literature confuses this difference and refers to corporate governance as only government control and regulations.

governance may be an important substitute for weak institutional environments, does it have a role as complement in strong institutional environments during mandatory IFRS adoption? Also, is there any relationship in the literature that supports a direct or indirect link between (internal) corporate governance and firm performance?

2.6 Corporate Governance Mechanisms

Corporate governance is a highly complex and interrelated concept which can be analyzed from accounting, finance and economics perspectives. Numerous scholarly studies have attempted to show that sound corporate governance is the foundation of a firm's long-term success. So far, the empirical results are mixed. Researchers point out that the inconsistent evidence from the extant literature could be due to methodological differences (Klein, et al. 2005), for instance, in using either publicly available data or survey data. Others prove that performance metrics such as accounting-based variables (Singh & Davidson, 2003) or market-based metrics as stock return, market value of equities could be determinants (Baysinger & Butler, 1985; Brickley at al., 1994; Cotter, Shivdasani, & Zenner, 1997; McWilliams & Sen 1997).

Holm and Schoeler (2008) argue that in terms of corporate governance mechanisms, transparency is more important than board independence in firms with international orientation, while board independence is becoming more important than transparency in firms with dispersed ownership. Analyzing 100 companies listed on the Copenhagen Stock Exchange (using a Danish dataset), they assert that to reduce the agency problem due to asymmetric information, a high level of transparency is required to reduce the cost of capital and is more significant factor for firms with an international orientation. This is because multi-international enterprises need to provide a higher level of disclosure to overseas investors.

Other study conjectures that board independence may be enhanced by foreign board membership, resulting in higher firm value. Oxelheim and Randoy (2003) point out that, due to globalization, there is a positive and significant relationship between foreign (Anglo-American) board membership and firm value. Their study uses a sample of firms with head-offices in Norway and Sweden. They proxy corporate performance by Tobin's q, after a variety of firm-specific and corporate governance related factors have been controlled for.

In terms of methodology in measuring the effectiveness of corporate governance of managers, various scholars have attempted to use cross-sectional assessments based on scoring and indexing systems such as checklists used by rating agencies, namely Standard and Poor's Governance Services and Institutional Investor Services (ISS) on 7,000 companies within the FTSE Global Equity Index Series. However, most, if not all, of them are compromised by subjective perceptions and lack of scientific rigor and methodology, which could result in misleading conclusions (Schmidt & Brauer, 2006; Sonnenfeld, 2004). As a result, such structural aspects may lead to questionable reliability and validity (Black et al., 2006, Gascoigne, 2004).

2.6.1 The roles of Corporate Governance to Firm Performance

Though a cross-sectional assessment of corporate governance effectiveness may be flawed, empirically, there are numerous research studies relying on external cross-sectional data to assess this relationship such as Renders et al., (2010). However, the direct association between better corporate governance and stock price performance still remains unclear with mixed results. Other schools of thought apply firm-level variables, claiming that time-series level data may be a better indicator. For instance, Black et al. (2006) endeavor to measure the relationship between firm-level corporate governance. The proxy consists of combined governance indices from the six corporate governance sub-indices. These are Brunswick (Brunswick UBS Warburg), Troika Dialog (Russia's largest and oldest investment bank), S&P Governance, S&P Disclosure, Institute of Corporate Law and Governance (ICLG) and Russian Institute of Directors (RID). Their study aims at measuring any substantial firm-index fixed effects and firm market value, proxied by Tobin's q and, market-to-book and market-to-sales for Russian firms between 1999 and 2005.They show statistically significant and strong correlation between governance and market value both in ordinary least squares (OLS) and in fixed effects regressions. While Black et al. (2006) definitely shed some light on the modeling problem of omitted variables, endogeneity and using time-series data to track the impact of corporate governance on market share price, it lacks generalization to other institutional and country settings. It focuses on analyzing corporate governance matters in a specific institutional context (Russia) rather than comparing the phenomenon under investigation across different institutional settings.

In sum, the empirical results suggest that internal corporate governance mechanisms such as board diversity in general are positively related to organizational performance, but not directly. For example, Gani and Jermias (2006) focus on board independence to investigate its effect on corporate performance across two different strategies, namely, cost efficiency and innovation. Using data for 109 manufacturing firms in the S&P500 (436 firm-year observations), they argue that a high level of board independence has a significantly more positive effect on firms' performance (proxied by the calculation of ratios in ROE and ROI) in the cost-control strategy but not in innovation. Thus, it appears that board independence is essential for firms to succeed. Westphal (1999) points out that outside (external) dominated boards will be effective in mitigating managers' self-interested opportunistic behavior. Also, independent boards can discipline bad managers, including termination of employment (Dallas, 2001), and pursue more financial control and monitoring (Baysinger & Hoskission, 1990; Zahra & Pearce, 1998).

2.6.2 Internal corporate governance and reporting incentive for IFRS adoption

Theories suggest that to mitigate the agency problem, [10]and to ensure that managers will fulfill their roles in adopting IFRS efficiently with strong incentives, boards of directors have to exercise their fiduciary duties in maintaining an effective corporate governance and control opportunistic behavior.

Aksu (2006) studies the impact of strong local corporate governance principles along with the voluntary adoption of IFRS on the transparency and disclosure level (proxied by the Transparency and Disclosure: T&D Index scores) for a sample of 52 large firms listed on the Istanbul Stock Exchange. The study finds that the T&D Index scores improve when firms adopt IFRS voluntarily, indicating their commitment to such best practice in corporate governance. Similar to the Lopes and Walker (2008) study of Brazilian firm earnings quality, Turkey provides another example of a developing country with an inherent need for external capital. However, the Asku study's sampling period of two years is too brief.

[10] The agency problem or theory states that since Berle and Means (1932) has stressed that when ownership and control separates between shareholders and management, managers' incentives (motivations) for financial reporting may be subject to opportunistic behavior, favoring their personal gains at the expense of shareholders' benefit. As a result, even though there may be policies in place from shareholders who are willing to adopt IFRS for the firms' well being, firms' financial reporting and disclosure strategy is carried out by managers. Managers' incentives (motivation) are subject to the temptation of opportunistic behavior, caring about their personal gains at the expense of the shareholders' benefits.

Examining the effects from firm-specific factors, Durnev and Kim (2005) argue that firms with three attributes (investment opportunities, external financing and ownership structure) are positively identified with the quality of corporate governance and disclosure practice. More importantly, Durney and Kim document that good investment opportunities provide more incentives for firms to improve their internal corporate governance mechanisms, even domiciled in countries with weaker legal frameworks. While legal institutional factors matter for corporate governance practices (La Porta et al., 1998), this study indicates that firms with strong incentives seem to adapt to poor legal frameworks to develop efficient internal governance regimes, resulting in greater positive correlation with the valuation of firms in stronger legal regimes. This implies that even though a strong legal institution is important when the magnitude of the legal framework and firm values are positively related, the positive relation becomes insignificant when transparency and governance scores are included in the regression model. Their study indicates that strong firm motivations are important in creating better governance and disclosure practices in weak legal environments. That internal corporate governance dominates the institutional environment has been noted by Hail and Leuz (2006) whose empirical findings show that the cost of capital reducing effects in countries is significantly associated with extensive disclosure requirements, but not with strong securities regulation and stricter enforcement regimes.

To protect shareholders' interests against improprieties in mandatory IFRS adoption, it becomes important to monitor internal corporate governance and oversee management behavior. This monitoring requires independent board members with financial expertise to control the audit committee and remuneration committee, separation of duties between the chairman and CEO, and good risk management and control. Therefore, a broad assessment index including comprehensive internal corporate governance is important to measure the board of directors' commitment to mandatory IFRS adoption. At present there appears to be no study addressing this empirical issue. Thus, this study integrates the variable of firm-specific internal corporate governance mechanism as one of the influences in the IPOO model. It will be tested to examine the extent of such "Influence" to the firms' reporting incentives in implementing mandatory IFRS adoption.

Above all, the literature review summarizes the progressive studies of IFRS adoption from voluntary to mandatory setting as the Influence; and how such influence may relate to benefits such as higher quality of accounting information and lower cost of equity. However, due to the limitations of data and sample size, as well as transitional period, there is, so far, lack of consistent empirical results. Moreover, besides the accounting standard, the IPOO model suggests that reporting incentives may exert as a significant factor in mandatory IFRS adoption which results in differential capital market benefits. Since this topic has not been examined thoroughly and therefore it leads to the following potential research gap for the study

2.7 Potential Research Gap

Taken together, the above literature review discusses and shows the different stages and elements in the research on IFRS adoption. It indicates that prior studies from both voluntary and mandatory IFRS (i) have no consensus as to whether accounting quality has been enhanced; and (ii) have not documented uniform capital market benefits for all adopting firms. This latter point arises mainly because simply adopting IFRS on its own does not guarantee high accounting quality for all adopters.

The extant literature gradually recognizes the importance of reporting incentives in mandatory IFRS adoption. Translated into the IPOO model (Rahman et al. 2002), this study's view is that there may be different firm- and country-specific forces that "influence" reporting incentives. When strong reporting incentives drive high commitment on mandatory IFRS adoption, the output will be a set of high quality financial reports, which leads to positive capital market outcomes. However, due to the limited data availability, non-comprehensive proxies and single-country studies in prior research, the academic community still does not know if reporting incentives determine accounting quality in mandatory IFRS setting. Therefore, with more cross-sectional data available in the post-adoption period and better metrics for proxies for both the cost of equity and reporting incentives, this study can extend, modify and validate prior studies by examining if the cost of equity for mandatory adopters is lower and what factors affect this result. After testing the overall effect of mandatory IFRS adoption, this study will investigate the relationship between reporting incentives and capital market consequences in mandatory IFRS adoption.

The next chapter will develop and examine the theoretical framework which underpins the empirical analysis introduced in the later on.

Chapter3 - Basic Theory and Theoretical Framework

To follow up the literature review, this chapter provides explanation of the philosophical and methodological choices open to the researcher and justification for the specific choices made. Also, Chapter 3 reviews the relevant literature and identifies the research gap in studying reporting incentives for mandatory IFRS adoption. This chapter explores and integrates the IPOO concept (Rahman et al. 2002) into the theoretical framework that underpins the study of reporting incentives on mandatory IFRS adoption.

3.1 Explanation of the philosophical and methodological choices open to the researcher and justification for the specific choices made.

When undertaking any research decisions have to be made as to the appropriate method to address the research question. This means understanding the philosophical foundations of the research methods that are proposed and, in particular, the epistemological and methodological assumptions that underlie the different research traditions. Whatever choice of research method, knowing the philosophical framework is important in that the chosen method significantly influences the choice of the research design and methodology. This extends to the choice and type of sample data and collection process, research models used to analyze the data, and the subsequent interpretation of the research findings. Basically, there are two main streams of research paradigms that this study can choose from: empiricism, which includes the positivist paradigm, and the interpretive approach.

Positivism

Positivist researchers contend that logical reasoning and empirical observation are important criteria to conduct research. Logical reasoning mainly relies on the interpretation by mathematical and statistical calculation, such as multiple regression models. Alternatively, empirical observation argues that the knowledge discovery process can be achieved by direct observation, measurement and analysis, and finally conclusions can be drawn.

Overall, the positivism approach is more suitable for research studies in scientific environments that require a rigorous and high degree of predicted certainty, such as forecasting. The findings from various tests become more reliable and can be

generalized to similar conditions. However, the positivist approach may become difficult to measure and predict human behavior.

Phenomenology

Another group of researchers said that in studying human behavior, there are numerous, unpredictable factors involved that may be neglected by the positivist models. Thus, the phenomenologist takes a totally different approach to discover new knowledge. The strong belief is that when the researcher(s) is (are) involved in the research process to see each event and activity as unique, each person's personality and belief system may not be similar to others. Such uniqueness may influence the research outcome and conclusion. Because of the focus, phenomenology therefore is take smaller sample sizes, comparing to positivist approach

Obviously, both positivist and phenomenologist approaches have their strong and weak areas. Research study always philosophical preference based upon the nature of the study. Table 1 summarises the advantages and disadvantages of the two approaches.

Table 3-1: Advantages and disadvantages of the positivist and phenomenological approaches

		Positivism			*Phenomenology*
Advantages	•	Applicable for establishing simple causal relationships		•	Applicable for establishing more complex and interrelated causal relationships
	•	Good where straightforward objective research is required		•	Preferable where subjective assessment is required
	•	Good where purely quantitative analysis is required		•	Good where purely or largely qualitative analysis is required
	•	Good where the sample size has to be large and large amounts of data have to be processed		•	Applicable for generating theories based on a few complex observations
	•	Appropriate if the question is about 'how often'' or 'how quickly' something happens		•	Preferred where the researcher wants to develop a detailed understanding
	•	Results can be replicated		•	The researcher can modify the research to allow for what he or she has learned
	•	Results tend to be highly reliable		•	Better at making explanations as to why things happen

Disadvantages	•	Not applicable for research based on people		•	Not applicable for research based on purely scientific or mathematical principles subject to immutable laws
	•	The reductionist approach may be too restrictive in some cases		•	Highly complex
	•	The research design cannot be modified in any way to allow for what the researcher has learned		•	May be difficult to replicate findings
	•	Produces only a snapshot of basic knowledge			Results may be relatively unreliable
	•	When using operationalisation may fail to measure numerous important variables		•	There is a limit to how much understanding the researcher can develop within time limits
				•	Results may be open to interpretation
				•	May lack scientific rigour and be affected by dilution
				•	Data classification and analysis can be very complex and time consuming

Based upon the advantages and disadvantages of the two approaches, the research presented in this thesis lends itself to the positivist approach since it lends itself to the quantitative-oriented positivist approach since the research question can be studied using a large sample size, and relatively reliable inferences can be drawn from the research findings. Hence, given the research question, it naturally lends itself to the positivist approach. That is not to say, the phenomenological approach would be totally inappropriate, but stronger inferences can be derived from the positivist approach. This is the case since this study examines the individual and interrelated causal relationships for reporting incentives in mandatory IFRS adoption.

3.2 Explanation of the terminology of 'incentives' in the study.

An agency relationship is established when there is a separation between ownership and management. The principal engages the agent to perform some service on their behalf which involves delegating decision making authority to the agent (Jensen and Meckling, 1976). However, when both the principal and agent aim at maximizing his or her own benefits, it is possible that the self-interested agent will not always act in the best interests of the principal. This is known as the agency problem.

The agency problem may also apply to mandatory IFRS adoption. Since IFRS is a set of principle-based standards which allow a certain amount of discretion to managers on how to report financial performance and positions, self-interest managers may not have strong reporting incentives when adopting IFRS. Whether reporting under IFRS, or any other standard, is done in full disclosure with transparency or with cosmetic adoption without the intention to reduce information asymmetry will determine the quality of the "Output". Reporting incentives are an integral element for managers to commit to the mandatory IFRS adoption process. To incorporate the concept of Rahman et al. (2002), reporting incentives and accounting regulations (from mandatory IFRS adoption) will become the "Influence" on how managers process their financial reports. This study stresses that without such incentives, accounting standards alone are not sufficient to exercise strong influence in the IFRS adoption process. In turn, good quality of financial output will not be possible. As a consequence, the desired capital market outcome is not achievable.

Due to the requirements of more and greater disclosures and the use of fair value accounting, mandatory IFRS adoption may be considered higher quality reporting. However, it is questionable as to whether the mere adoption from domestic GAAP to IFRS will necessarily lead to improved financial reporting quality (i.e. better output) with the subsequent desired capital market benefits (i.e. better outcome). Extant literature still debate on if the actual financial reporting outcomes are in part or mainly shaped by reporting incentives (e.g. Leuz et al., 2003, Ball et al., 2003). The IPOO model provides a framework for understanding the drivers of improved financial reporting quality that distinguishes the internal and external factors that contribute to a better output.

A key issue within this framework is that the reporting discretion that underpins IFRS Principles means managers and their auditors have to exercise their professional judgements (e.g. decision in determining the required impairment of goodwill and property, plant and equipment). Hence, this research study explores if such reporting discretion is shaped by reporting incentives that are influenced substantially by different internal and external factors. This research study argues that such influences include both individual and joint effects of firm-specific (CBF and ICG) and country level institutions (IEF). These feed into the IPOO framework to drive the observable

outcome, which is measured in the case of this study, through a reduction in firms' cost of equity.

Even though Agency Theory dominates the paradigm that managers interests diverge from that of the principal's, there are alternative interpretations of the relationship. Stewardship theory argues that the assumptions in agency theory about individual benefit maximization may not hold for all managers (Davis, et al., 1997). It puts forward the proposition that, in contrast to the agent's self-interest orientation, some managers may become the stewards who are motivated to act in the best interests of their principals (Donaldson & Davis, 1991). Davis, et al. (1997) find distinct differences between the two theories of management behavior and these are summarized in Table 2

TABLE 3-2

Comparison of Agency Theory and Stewardship Theory

	Agency Theory	Stewardship Theory
Model of Man	Economic man	Sell-actualizing man
Behavior	Self-serving	Collective serving
Psychological Mechanisms		
Motivation	Lower order/economic needs (physiological, security, economic)	Higher order needs (growth, achievement, self-actualization)
	Extrinsic	Intrinsic
Social Comparison	Other managers	Principal
Identification	Low value commitment	High value commitment
Power	Institutional (legitimate, coercive, reward)	Personal (expert, referent)
Management Philosophy	Control oriented	Involvement oriented
Risk orientation	Control mechanisms	Trust
Time frame	Short term Cost control	Long Term
Objective	Individualism	Performance Enhancement Collectivism
Cultural Differences	High power distance	Low power distance

What Table 2 demonstrates is that when managers are stewards, they will see that given specific firm-specific company business factor (CBF) the firm will benefit from adopting IFRS. For instance, if managers are aware that business growth will be benefitted by using equity financing for such projects, there will be a greater need for external communications with outside equity investors about the company's financial

performance and position (Ball et al., 2003). Since mandatory IFRS adoption promotes greater and better disclosures, managers may align the needs of equity financing with substantive efforts in fully comply with mandatory IFRS adoption. Therefore, a particular set of firm-specific characteristics will become the CBF that may be positively associated with reporting incentives in IFRS adoption.

However, such strong reporting incentives may be challenged by managers' self-interested behavior. Because of the room for professional judgement under IFRS, managers may use the flexibility provided by the standards to undertake opportunistic behavior in order to maximize their own benefits rather than maximising the firms' CBF. As a result, mandatory IFRS adoption may become simply a label-type of reporting standard which has little or even negative impact on the firm (Daske et al., 2008). To resolve this issue, the board of directors who represent the interests of shareholders may need to implement effective internal corporate governance (ICG) mechanisms to mitigate the agency problem. The extant literature argues that the board of directors is important in controlling and regulating managers' commitment in mandatory IFRS adoption so that managers will implement such accounting regulation seriously (Daske et al., 2008).

In addition, users of financial information at the institution level may also play a role in influencing reporting incentives in mandatory IFRS adoption. In British origin (BO) firms, most users of financial reporting are domiciled in Anglo Saxon market-based economic environment; therefore, such users will demand substantial disclosure from IFRS adoption. On the other hand, the French origin (FO)'s government-based; German origin (GO)'s tax-based and Scandinavian origin (SO)'s socialist-based economy may differentiate their needs for the level of disclosures in IFRS-based financial reports. Therefore, it is possible that differences in legal origins within the EU may exert different influences on reporting incentives in mandatory IFRS adoption.

3.3 IPOO Model

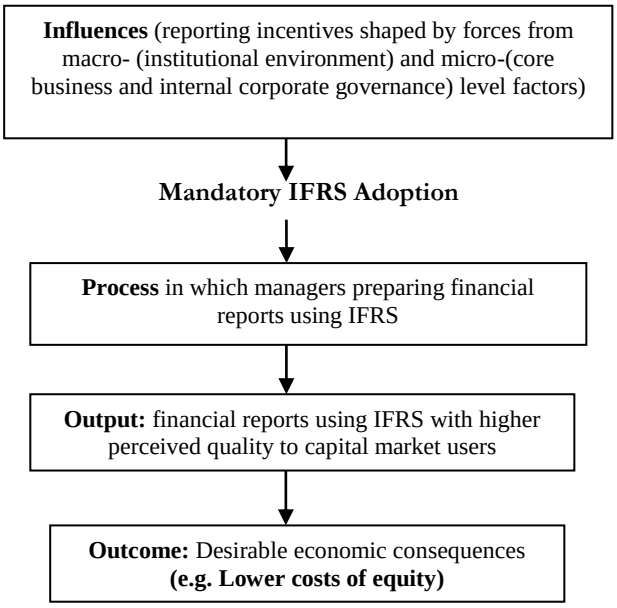
For full compliance of IFRS adoption to give more and better disclosures relies on managers' reporting incentives. Strong reporting incentives will act as a commitment to transparency of IFRS financial reporting by providing better and more disclosures.

Investors will be able to make better decisions with such high quality of financial information.

Specifically, the IPOO model from the literature review is incorporated into the concept of reporting incentives in the following Figure 3.1. Unlike Rahman et al. (2002), "Influences" are expanded to three different and distinct forces. First, there are external (or macro) effects from institutional environment factors (such as cultural, social, economic and legal aspects) that are uncontrollable by firms but potentially have major impacts on financial reporting and disclosure practices. Second and third are internal (micro) effects from firm-specific (core business factors, henceforth, CBF) and internal corporate governance (ICG by the board of directors) that influence the mandatory IFRS adoption "Process". In other words, both internal and external effects shape the commitment and motivations of firm managers, both individually and interactively in performing the IFRS financial reporting and disclosure practices. Accordingly, "Output" is the quality of financial reports and disclosure that comply with IFRS; and finally "Outcomes" refers to the economic consequences/benefits from capital markets, such as a lower cost of equity.

Figure 3.1- Extended IPOO Framework

To follow the conceptual diagram by Rahman et al. (2002), this study develops and extends it [11]from international accounting and reporting incentives into the following simplified graphic depiction of the IPOO relationship.



[11] Adapted IPOO framework, based on Rahman et al. (2002). In this version of the model, 'Influences' are expanded into three distinct effects: institutional environment (a macro influence) and core business and corporate governance (micro or firm-specific influences).

The literature review stresses that results from recent studies document significantly lower cost of equity (ROE) from mandatory IFRS adoption, but that such empirical tests are based on limited data availability. This research study hereby uses more extensive and detailed cross-sectional data to re-examine the question whether mandatory IFRS adoption can be associated with lower COE. The reason for this re-examination is that when the "Process" of adoption of high quality accounting standards alone does not automatically translate into high quality financial reports (i.e. Output), a positive economic "Outcome" from the capital markets is not guaranteed. Thus, the lower COE measured by prior studies (e.g. Li, 2010) cannot be generalized to the view that mandatory IFRS adoption is more beneficial than local accounting standards. This is because "Process" cannot be linked with "Outcome", unless there are "Influences" from reporting incentives. However not all mandatory IFRS adopting firms have the same high level of reporting incentives (i.e. they have different "Influences"). Thus, when prior studies record that the average COE is lower for mandatory IFRS adopting firms, this study gathers evidence to prove that the lowering effect may be largely attributed to those firms with strong rather than weak incentives. Hence, when reporting incentives can be comprehensively proxied and carefully controlled for, more insight on the relationship between the COE effect and mandatory IFRS adoption can be revealed.

Therefore, to examine the underlying economic outcomes from mandatory IFRS adoption, reporting incentives may be the important factor for mandatory IFRS adopters that determine if firms can have significantly lower COE. Differential reporting incentives can systematically result in different levels of the COE effect for mandatory adopters.

Why reporting incentives may be more important for mandatory adoption than voluntary adoption? When comparing reporting incentives between voluntary and mandatory IFRS adoption, prior studies (e.g. Hail and Leuz, 2007) support the view that firms that voluntarily choose to comply with and adopt IFRS should have stronger incentives than firms that are forced to do so. It is because serious voluntary adopters may explicitly and credibly commit themselves to more transparency or signal this to the capital markets by bonding with other voluntary adopters (Coffee, 2002). Thus, during the voluntary period, firm-specific motivation mainly shapes reporting incentives (Bova 2009 and Lopes 2008). Later, when IFRS adoption becomes mandatory, this study argues that reporting incentives are even more important to motivate managers to

achieve full compliance with IFRS in order to produce high quality financial reports. It is because when IFRS adoption becomes mandatory, it is possible that not all firms have the motivation to produce high quality financial reports since as an accounting regulation, firms are required to do so no matter whether they want to or not. According to the IPOO model, such "Process" (i.e. mandatory IFRS adoption) is important, but not sufficient to achieve the desirable capital market "Outcome", unless managers are really motivated to have strong reporting incentives.

Mandatory IFRS adoption is supposed to enhance comparability of financial information across different jurisdictions so that investors can assess and evaluate investment alternatives in a cheaper and better way. More cross-country investments by a broader set of investors globally will increase liquidity and risk-sharing among investors. As a result, with IFRS, firms will be able to (i) present better pictures of their firms' underlying economic performance and financial positions; and (ii) become more transparent by disclosing more relevant information.

Besides firm-specific characteristics, the literature also stresses the role of institutional environment factors that may also influence reporting incentives in mandatory IFRS adoption. In addition, recent literature shows that improved corporate governance ratings may lead to better firm performance and higher financial reporting quality (Renders et al. 2010 and Verriest et al. 2009). Corporate boards of directors have recognized the need to develop firm-specific internal corporate governance mechanisms for monitoring managers' behavior in IFRS adoption.

Therefore, in mandatory IFRS adoption, it needs both individual and joint-efforts from firm-specific business factors and internal governance systems, and country-specific institutional factors to shape reporting incentives in mandatory IFRS adoption that may be associated with a reduced COE. To achieve an effective "Process" in mandatory IFRS adoption, empirical results show that both firm- and country-specific components are important factors on the level of reporting incentives as "Influences". However, the study of the links between the COE and institutional environment or internal corporate governance in mandatory IFRS adoption has been rare in the literature. In the following sections, this study will continue to examine the three influences of reporting incentives in mandatory IFRS adoption.

3.4 The Components of Reporting Incentives

To comprehensively examine the IPOO model, this study looks into individual and combined effects on reporting incentives from the "Influences". Accordingly, the following sections discuss each element of the reporting incentives in turn.

3.4.1 The Importance of Firms' Core Business Factors (CBF)

How do we know managers are motivated by strong incentives? Prior studies on voluntary IFRS adoption tend to proxy strong reporting incentives by certain firm-specific characteristics such as size, growth opportunities and ownership concentration. These factors may motivate firms to adopt IFRS voluntarily and result in a lower COE. Similarly, for mandatory adopters this study argues that there are also certain factors that can proxy as strong reporting incentives and which also associate with lower COE. Since those business factors may lead firms to expect capital market benefits, it strengthens the commitment to implement IFRS financial reporting process, even though it is mandatory to do so. In addition, since IFRS is a principle-based accounting standard which allow managers' an element of discretion to report and disclose certain financial information, it is highly possible that some firms may disclose more and better in full compliance with the spirit of IFRS, rather than cosmetically adhere to the new standards. If firm managers believe that their particular CBF's are more aligned with the net expected benefits of mandatory IFRS, firms have stronger reporting incentives to adopt IFRS, relative to other firms without such CBF (Daske et al. 2007). However, as the literature review mentions, reporting incentives are not directly observable, therefore, the proposition is that certain firms' strong CBF can be proxied as high reporting incentives and this systematically leads to a differential COE effect for mandatory IFRS adopting firms.

However, just depending on firms' CBF is not sufficient to ensure strong reporting incentives, since managers still have discretion to exercise judgments in the process of mandatory IFRS adoption. To regulate and monitor managers' behavior, this study discusses the importance of firm-specific internal corporate governance mechanisms.

3.4.2 The Importance of Firms' Internal Corporate Governance (ICG)

Strong CBF is important to reporting incentives in mandatory IFRS adoption, provided that managers exercise their discretion to work hard with full commitment. Since IFRS is a principles-based standard, managers are given a certain amount of flexibility to

interpret and apply IFRS. Agency theory argues that managers may "abuse" their discretion by exercising opportunistic behavior to maximize their personal benefits.[12] To mitigate agents' insider benefits at the expense of shareholders' interests, boards of directors (elected by the shareholders) are expected to exercise their fiduciary duties and employ effective ICG mechanisms to control, monitor and regulate managers' behavior, including mandatory IFRS adoption.

In addition, corporate scandals in the past decade revealed (i) the existence of agency problems; (ii) that there is an emerging need to reform corporate governance, especially internal corporate governance regimes. For instance, countries like the U.K. have already mandated corporate governance recommendations into regulatory requirements such as firms' reporting 'Comply or Explain' (C or E) in corporate governance practices (Enriques and Volpin, 2007).

Therefore, this study will use corporate governance data provided by Deminor Rating which assesses the companies included in the FTS Eurofirst 300 index –based on a corporate-governance grid comprising over 300 criteria, including board structure and anti-takeover mechanisms, shareholder rights, and disclosure. The use of the Deminor Ratings has been common in the literature, as a comprehensive measure for the strength of corporate governance (Bauer et al. 2004, Khanna et al. 2006, Bozec 2007, Florou and Galarniotis 2007, Bauwhede and Willekens, 2008 and Renders et al. 2010).

Moreover, in seeking to understand reporting incentives, in addition to , the micro-level factors discussed previously, macro-based country-specific institutional factors cannot be ignored. In the following section, the theoretical link between the institutional characteristics of mandatory IFRS adoption and the COE effect in the IPOO model are described.

3.4.3 The Importance of Institutional Environment Factors (IEF)

Numerous research papers claim that IEFs, such as the economic system and legal enforcement, can influence significantly firms' reporting incentives in IFRS adoption (Chen et al. 2010, Christensen et al. 2008, and Christensen et al. 2007). Even though

[12] Agency theory argues that when agent engaged as a steward to perform some service on the behalf of others, often involving safeguarding assets belonging to them. The principal delegates decision making authority to the agent. However, Agent may be able to act in ways unfavorable to or not approved by the principal – shirking, fraud, etc. (Watts, R.L., & J.L. Zimmerman, 1978)

mandatory IFRS adoption is a regulation, the effectiveness of full compliance is determined to some extent by cultural, economic and social factors, enforcement and other differences in IEFs among EU countries. By using comprehensive proxies for different national legal origins and institutional characteristics, it will be possible to investigate how IEFs influence the economic consequences of IFRS adoption.

Wang and Yu (2009) and Bushman et al. (2004) argue that corporate transparency is not only associated with, but is a product of high quality reporting standards (such as IFRS) and an appropriate level of reporting incentives, as measured by a country's level of investor protection and its political structure. However, without looking into the aspects of corporate characteristics, Wang and Yu only associate the relevant institutional factors as important in explaining reporting incentives as (i) minority shareholders' protection against expropriation by corporate insiders and majority shareholders (proxied by the index of anti-director rights); (ii) legal origin (measured by a dichotomous variable indicating whether a country's laws originated from the common-law or code-law tradition); and (iii) the level of legal enforcement (measured by a country's judicial efficiency, rule of law and government corruption).

Together with CBF and ICG, this study thereby measures if differences in country-specific IEF can individually and interactively influence reporting incentives that are associated with the lower COE following mandatory IFRS adoption.

Thus, the theoretical framework of this study points out that joint effort from firm-specific and institutional environmental factors, and shareholders' monitoring efforts (represented by board of directors' internal corporate governance mechanisms) together with IFRS adoption may be associated with substantial differences in capital market outcomes.

Regarding the proxies of institutional factors, this study argues that IFRS research may need to examine the more "sticky" and fundamental base in institutions. In addition, prior studies broadly classify IEF with a simple binary approach in terms of code and common-law countries (e.g. Ball et al. 2003). As a result, significant driver(s) such as arms lengths contracting, timely loss recognition and other accounting quality variables from institutions that shape variations in reporting incentives become unclear (Wysocki, 2010). Hence, a greater spectrum of proxies with a more differentiated and

comprehensive approach will allow a greater insight into the effect of IEF on mandatory IFRS adoption.

This study examines if there are relationships between a group of countries, defined by their legal origins which broadly capture legal, economic and cultural perspectives across the EU (La Porta et al. 1999), and capital market benefits due to mandatory IFRS adoption. Hence, EU countries can be divided into four distinct groups with their own origins: (1) British-origin (BO) (2) French-origin (FO) (3) German-origin (GO) and (4) Scandinavian-origin (SO). These four legal origins are still a new concept to accounting research; and prior studies (such as Krivogorsky et al. 2010) mostly study the relationship between legal origins and motivation for firms to voluntarily adopt IFRS. To the best of my knowledge, so far, there is no study to directly examine the COE effect from mandatory IFRS adoption under differential legal origins in the EU.

Early studies based on cultural differences primarily test if there is a significant link between cultural values and their impact on accounting practice and disclosure (Jaggi, 1975; Gray, 1988; Perera, 1989, Doupnik and Salter, 1995; Zarzeski, 1996) and claim that the relative importance of the impact in empirical studies is fading due to globalization. However, even though there is capital market integration and a one-for-all accounting standard adoption in one single economic unit such as the EU, the four distinct legal origins show that there are still national diversities at the institutional environment level that may affect managers' accounting practices. Therefore, it is possible that such dynamics among different institutional factors of a united but diverse community such as the EU (including regulatory, political, social customs, cultural and contracting practices) will have differential reporting incentives on mandatory IFRS adoption.

This argument is supported by a recent study that even though the EU is in the process of capital market integration and institutional differences in terms of enforcement and regulations in capital markets may be becoming smaller, fundamentally long-lasting and deeply-rooted legal and cultural differences do still exist (Krivogorsky et al. 2010). Historically, legal origins of British origin (BO) (i.e. U.K. and Ireland) belong to Anglo-Saxon groups while many others come from Continental Europe. In the Anglo-Saxon countries, the role of financial reporting is more emphasized in providing information for equity investors' decision-making. On the other hand, with the introduction of IFRS,

the Continental jurisdiction is gradually changing from its traditional purpose for accounting information to regulate companies to be more used in business and equity investment purposes (Bebbington and Song, 2003). Similar to BO, French origin (FO) has gradually established its equity markets, which requires more transparent financial information from for the needs of investors. When such origins adopt IFRS, the additional disclosure may lead to a lowering in the COE. On the other hand, Scandinavian origin (SO) is regarded as an environment of significant governmental involvement in the economy and in the way firms operate (i.e. Sweden, Demark and Finland). German origin (GO) previously adopted its Handelsgesetzbuch (HBG – the German Commercial Code as the national GAAP) for preparing financial reports primarily to reflect the needs for tax compliance. The information need in preparing accounts under HBG therefore substantially differs from IFRS, which mainly provide information for investors. Hence, this study argues that such differences in IEF may systematically shape mandatory firms' incentives in IFRS financial reporting and lead to non-uniform COE effects individually and interactively with CBF and ICG.

In addition, Krivogorsky et al. (2010) argue that national diversity in terms of jurisdictional differences and national levels of bureaucratic administrative formalities pertaining to accounting measurements and practices should not be ignored. Another way to test the institutional effects on the cost of equity (COE) along with mandatory IFRS adoption is to comprehensively look at national levels of bureaucratic and administrative formalities. By retrieving the partitioning of EU countries based on the approach adopted by Institutional Profiles database (www.cepii.fr/ProfilsInstitutionels Database.htm), 18 EU member countries can be classified into A, B, C & D sectors.

Sector A being the higher-than-average score for countries with developed public institutions and civil society. It estimates each country's such factors as public rights and liberties, transparency, corruption control, efficiency of administration, independence of the justice system Sector B captures the higher scoring for goods and service area such as regulation of competition and trade openness, privatization, nationalizations, freedom of prices, and intellectual property protection. Sector C belongs to the development of capital markets in areas like interest rates freedom, financial openness, micro-lending and regulations. Finally, sector D are those estimates on labor market and social relations, which are about trade union freedom and pluralism, respect for labor laws, and the circulation of workers.

In order to test how mandatory IFRS firms' interact with diverse institutional profiles from the EU in relation to the COE effect, it can be hypothesized that jurisdictions with focuses on sector A (i.e. public institutions and civil society), sector B (i.e. goods and services) and sector C (capital market) will be in reinforcement with mandatory IFRS adoption towards the lowering COE, because all of these activities can facilitate along with the mandatory IFRS process. However, sector D with its emphasis on labor market and social relations, then mandatory IFRS adoption may not lead to any significant COE effect.

As discussed, in an effort to overcome various limitations and caveats from prior studies on IFRS research, this study uses more data availability to cover a longer time period, uses a cross-countries comparative study and develops comprehensive proxies of reporting incentives. In doing so it undertakes by the following:

(1) Focuses on firm-specific factors (i.e. CBF) as a driver for reporting incentives;

(2) Employs additional firm-specific factors for internal governance effectiveness (i.e. ICG) as an influence on reporting incentives;

(3) Uses two different but more comprehensive proxies for IEF (i.e. legal origins: BO, FO, SO and GO; and different national Institutional Profile sectors: A, B, C and D).

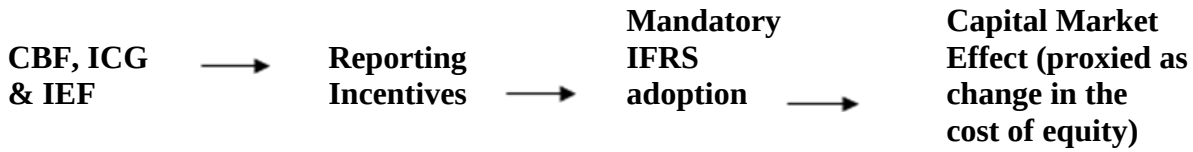
This study therefore examines if and how CBF, ICG and IEF individually and interactively determine reporting incentives in the IPOO process, with the consequences measured by differences in the COE reducing effect. In the following section, this study will continue to discuss the proxy for ex-ante cost of equity as the measure of capital market benefits, which also becomes the dependent variable in the models used to analyze the data.

3.5 Cost of equity (COE) as a measure of capital market outcomes

To measure capital market benefits from IFRS adoption, the literature always refers to changes in the COE (e.g. Li, 2010; Daske et al. 2008; Hail and Leuz, 2004). To integrate with basic theory, Figure 4.2 provides a simple illustration about measuring the COE.

Figure 3.2 – Proxies of Reporting Incentives

The proxies for "Influences" (two micro and one macro levels) on manager incentives will be: Core Business Factors (CBF), Internal Corporate Governance (ICG); and Institutional Environment Factors (IEF).



CBF – Core Business Factors are particular firms' characteristics and profiles that interact with mandatory IFRS adoption and may be associated with the expectations of capital market benefits.

ICG – firms' Internal Corporate Governance mechanisms and systems to regulate, monitor and control managers so that they will exercise their full commitment in implementing mandatory IFRS adoption; and mitigate their opportunistic discretionary decisions.

IEF – Institutional Environment Factors are those country-specific legal, economic, social, and cultural aspects that interact with mandatory IFRS adoption; and possibly relate to substantial capital market benefits.

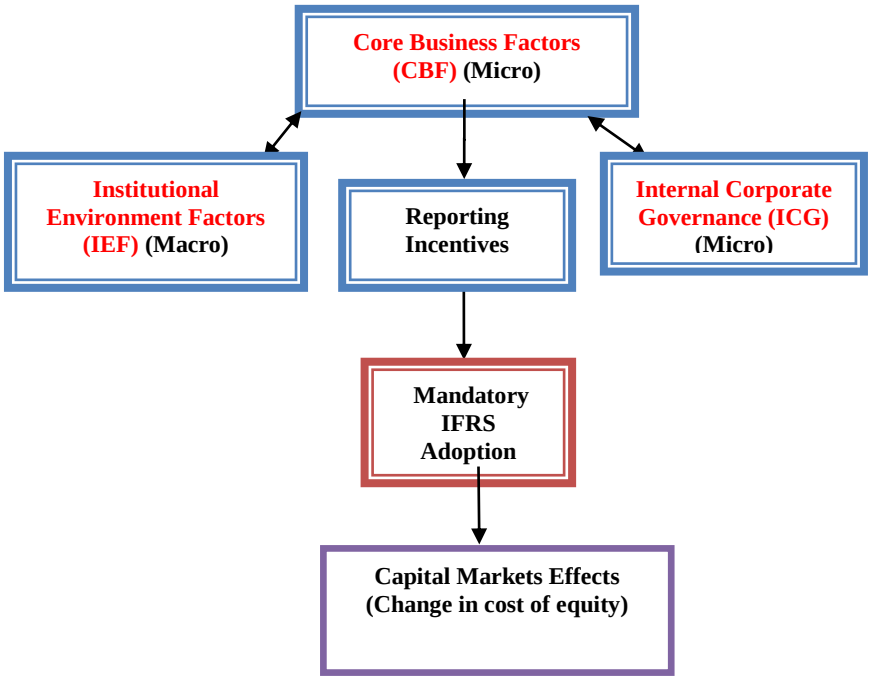
To quantify the effects of IFRS adoption, what are termed economic consequences, Daske et al. (2007) argue that (1) due to different managerial incentives, the exists heterogeneity of economic consequences by IFRS adoption; and therefore (2) high quality accounting standards *per se* (such as IFRS) do not, of themselves, ensure high quality financial reporting practices.

Equity markets will recognize which firms have made a serious commitment to mandatory IFRS adoption. Economic theory argues that information asymmetry between the firm's managers and investors will be reduced and consequently the COE will be lowered. Hence, more and better disclosure via IFRS improves information flows, increasing transparency, and may result in investors' having a lower required return, which leads to a lower observed COE. (Covrig, DeFond and Hung, 2007). A lower COE is one of the key expected benefits from IFRS adoption. (Leuz and Verrecchia, 2000; Lambert et al. 2007). The link between firms' differences in reporting incentives and benefits attributed to shareholders will be examined by following prior studies such as Li (2010) and Daske et al. (2006) and use as a proxy for this the change in the COE.

Thus, any change in COE is measured between (i) voluntary and mandatory IFRS adopters and (ii) mandatory adopters in the pre- and post-mandatory periods. After that, tests on the effect of COE on the mandatory adopting firms from each component of CBF, ICG and IEF and interactions between these, to find out if these substitute or complement each other. This conceptual framework can be illustrated by Figure 3.3.

Figure 3.3 – Reporting Incentives to Influence Mandatory IFRS Adoption

In the mandatory IFRS setting, this model conceptualizes the research framework to test the proxies of reporting incentives for CBF, ICG and IEF individually and any interactions between them.



This framework of incentives/IFRS adoption/capital market performance sequence reflects prior studies that report that (i) IFRS *per se* is not the sole determinant of capital market effects, and (ii) there is heterogeneity of capital market effects from different firms in different countries, probably due to the variations in firm incentives for financial reporting after the adoption of IFRS.

By treating CBF, ICG and IEF in an inter-connected manner, this holistic research context may be able to measure any significant direct association between these influences on incentives in mandatory IFRS adoption and the corresponding consequences of changes in the COE.

So far, there are prior studies suggesting that the role of accounting standards per se is much more limited than previously thought, even if such standards become uniformly regulated (Wysocki, 2010). Overall, given the inconclusive results from the prior studies on mandatory IFRS adoption, this study aims at replicating, validating and adding to previous studies to add to the extant knowledge about the important roles of reporting incentives in mandatory adoption of IFRS (e.g. Daske et al., 2007, Bova 2009, Bova and Pereira, 2009).The underlying theory argues that such reporting incentives can be systematically shaped by firm-specific CBF and ICG and country-specific IEF. The results will call attention to the joint effort and commitment from management, the board of directors and government in successful implementation of mandatory IFRS adoption. The ultimate objective of IFRS is to prepare and communicate high quality financial information with sufficiently detailed disclosures for global equity investors to make decisions in the capital markets. To achieve this objective, firms need strong reporting incentives to fully comply with IFRS when it is adopted. The present study emphasizes that in the IPOO model, mandatory adopters are faced with different firm-specific CBF and ICG, and country-specific IEF which will influence IFRS reporting incentives. From the users of IFRS financial reporting perspective, such differences in reporting incentives will be associated with substantial variations in their information content and hence in capital market effects (proxied by a lower COE). Various tests will be undertaken to show that, to achieve strong reporting incentives and capital market effects, a firm's management needs to interact among the dynamics of these three forces.

After the basic theory and theoretical framework have been discussed, the next chapter will outline this study's research questions, aims and objectives.

Chapter 4 - Research Questions, Aims and Objectives and Hypotheses

To advance the argument of chapter 3, the following research questions, aims and objectives have been developed. Then this will be followed by establishing a set of relevant research and operating hypotheses.

4.1 Research Aims

The major aim for this research study is that mandatory IFRS adoption has a dissimilar effect on the cost of equity compared to voluntary IFRS adoption, when comparing any differences in the COE for mandatory adopters between the pre- and post-mandatory periods. The second research aim is to examine the relationship between mandatory adopters' proxies of reporting incentives and any significant association with the COE.

To accomplish the above research aims, the following formal research objectives have been developed.

4.2 Research Objectives

Research Objective 1

To examine if there are changes in the COE for mandatory IFRS adopters when (i) compared to voluntary IFRS adopters for the whole sampling period; and (ii) between the pre- and post-mandatory IFRS adoption periods .

Research questions for research objective 1

The initial test is to find out if the average COE for mandatory adopters is significantly lower than that of non-mandatory adopters, regardless of the mandatory adopters' reporting incentives. In addition, empirical tests are performed to study if it is empirically evident that mandatory IFRS adoption by itself will associate with lower COE for mandatory adopting firms between the pre- and post-mandatory adoption period (i.e. between 2000 to 2004 and 2005 to 2009).

1st Research Question for objective 1: Are there any changes in the COE for mandatory IFRS adopters when compared to non-mandatory adopters for the period 2000 to 2009?

2nd Research Question for objective 1: Are there any changes in the COE associated with mandatory IFRS-adoption in the post-2005 than that of pre-2005 period?

After the first stage, there will be initial evidence to show if there is any "average" capital market effects of mandatory adoption of IFRS through changes in the COE between the pre- and post-mandatory period.

Research Objective 2

To study if differences in firms' reporting incentives in relation to mandatory IFRS adoption that are related to dissimilar effects in their COE. This objective can be achieved by examining both the individual and interactive effects of firms' reporting incentives, proxied by CBFs, ICG and IEFs, in the overall mandatory IFRS adoption based on the results of the first research questions.

Research question for research objective 2

Research question for objective 2: Are changes in the COE associated with firms' reporting incentives, as proxied by core business factors (CBFs), internal corporate governance (ICG) and institutional environmental factors (IEFs)?

To continue this study, in the next section, the relevant research and operating hypotheses pertaining to the above-mentioned research questions will be discussed in detail.

4.3 Research Hypotheses

Given the above research aims and objectives, it is an empirical question whether and how the COE reducing effect of mandatory IFRS adoption is affected by firms' particular characteristics, corporate governance regimes and countries' institutional environment. To conduct empirical tests, the following research and operating hypotheses have been cultivated:

4.3.1 Research Hypotheses 1 to 3 (RH1 to RH3)

The rationale of Research Objective #1 from above section exploits that even with the mandate to adopt IFRS, it is still unclear if firms adopt IFRS mandatorily experience any COE effect when compare to voluntary adopters. Also, for mandatory adopters, it is inconclusive to be evident that if their COE is different between the pre- and post-mandatory period. Therefore, the following RH1 and RH2 test for any overall difference in the COE, irrespective of reporting incentives.

RH1: There are significant differences in the firms' implied COE in the EU between voluntary IFRS adopters and mandatory IFRS adopters

Using limited data from January 1, 2005, Li (2010) measures lower COE for mandatory adopters during transition period only. However, this study argues that with differential reporting incentives for mandatory adopters, mandatory IFRS adoption alone is not sufficient to warrant higher quality, which leading to lower COE. Thus, this hypothesis expects that using more data beyond the transition period to test if, on average, the COE for mandatory IFRS adopters is actually not different between the pre and post-mandatory period.

RH 2: The COE for mandatory IFRS adopting firms does not differ between the post (2005 – 2009) and the pre-adoption period (2000 – 2004).

Previous chapters argue that in IPOO concept, even though IFRS adoption becomes mandatory, reporting incentives is important (Influences) to determine how managers perform financial reporting (Process), prepare financial reports in accordance with IFRS (Output); and subsequently lead to different COE (Outcome). Earlier chapters explore that due to the possible differences in reporting incentives, whether the COE is reduced in mandatory IFRS setting is still an open question. Accordingly, the following research

hypothesis #3 is developed to test if different CBF, ICG and IEF as proxies of reporting incentives play significant roles in reducing COE in mandatory IFRS adoption.

RH3: The higher the level of firms' CBF, ICG and IEF to adopt IFRS mandatorily, the higher the reducing effect of the COE.

4.4 Operating Hypothesis for Research Hypotheses

To carry out various empirical tests and gather statistical evidence for the above-mentioned research hypotheses, the following operating hypotheses are developed (summarized in Table 4.1).

4.4.1 Operating Hypotheses 1 and 2 for Research Hypotheses 1 and 2 (RH1 & 2)

As indicated in Table 4.1, both operating hypotheses 1 and 2 are designed to test the first research hypotheses 1 and 2 that if the COE for mandatory IFRS adopting firms have been different (1) from voluntary IFRS adopting firms; and (2) between the pre and post-mandatory IFRS period.

4.4.2 Operating Hypotheses 3 to 7 for Research Hypothesis 3 (RH3)

For mandatory IFRS adopting firms, this study tests if there are certain high level of firm-specific characteristics may become the statistically significant micro-level influence, proxies as CBF, ICG and their interaction, to associate with different effects in the COE (operating hypotheses # 3, and 4).

In addition, the country-specific IEF that can be proxied by the country's legal origin (namely BO, FO, GO and SO) and Sectors (namely Sector A, B, C and D) respectively. As discussed in Chapter 3, legal origins may influence managers' reporting incentives even though the adoption is mandatory. IFRS is essentially a set of standards developed for stock-market-based economies such as the U.K. and France (i.e. BO and FO); managers in other countries with major debt-markets such as Scandinavian Origin (SO) may not have strong incentives to commit in IFRS adoption. To test for the effects of mandatory adopters' IEF and respective interactions with CBF on COE, this study develops operating hypotheses #5 to 7 accordingly.

4.4.3 Operating Hypotheses 8 for Research Hypothesis 3 (RH3)

The results from testing the above-mentioned operating hypotheses #3 to 7 will exhibit if CBF and ICG are both significant components to have influences to reporting incentives which result in different effects in the COE. Then, operating hypothesis 8 is designed to test if various IEFs interact with high level of CBF and ICG in mandatory IFRS adoption will also work together in the lower effects of COE. However, as per the discussions in above chapter 3 that there may be substantial variations in the COE effect from different cultural, administrative, legal and business practices of IEF. Hence, even though it is a mandate to adopt IFRS by law and even mandatory IFRS firms are with strong CBF and ICG, It is expected that the COE effect to be different in various legal origins.

After the discussion of research questions and hypotheses, in next chapter, sample design and data collection process will be presented. Then, it will be followed by Chapter 6 to develop the research models before examining various empirical results in Chapter 7.

Table 4.1

Summary of Research Questions, Research and Operating Hypotheses, Empirical Tests and Test Tables

Research Questions	Research Hypotheses	Operating Hypotheses
1st Research Question for objective 1: Are changes in the cost of equity for mandatory IFRS adopters compared to voluntary IFRS adopters for the period 2000 to 2009?	RH1: There are significant differences in the firms' cost of equity in the EU between voluntary IFRS adopters and mandatory IFRS adopters	OH1: The cost of equity for mandatory IFRS adopting firms is different from voluntary IFRS adopting firms for the whole period from 2000 to 2009.
2nd Research Question for objective 1: Are changes in the cost of equity associated with mandatory IFRS-adoption in the post-2005 than that of pre-2005 period?	RH 2: The cost of equity for mandatory IFRS adopting firms does not differ between the post (2005 – 2009) and the pre-adoption period (2000 – 2004).	OH2: For mandatory IFRS adopting firms, the cost of equity in the post-mandatory period is not different from the pre mandatory period.
Research question for objective 2: Are changes in the cost of equity associated with financial reporting incentives, proxied by core business factors (CBFs), internal corporate governance (ICG) and institutional environmental factors (IEFs)?	RH3: The higher the level of firms' CBF, ICG and IEF to adopt IFRS mandatorily, the higher the reducing effect on cost of equity.	OH3: The cost of equity effect of mandatory IFRS adopting firms is negatively associated with strong CBF, other things being equal.
		OH4a: The cost of equity effect of mandatory IFRS adopting firms is negatively associated with high ICG, other things being equal.
		OH4b: Ha: The cost of equity effect of mandatory IFRS adopting firms is negatively associated with strong CBF and ICG, other things being equal.
		OH5: The cost of equity effect for mandatory IFRS firms is negatively associated with legal origins of BO and FO, but positively associated with legal origins of GO and SO, other things being equal.
		OH6: The cost of equity effect for mandatory IFRS firms differs between strong CBF and their legal origins, other things being equal.
		OH7: The cost of equity effect for mandatory IFRS firms is negatively associated with countries from sectors A, B, C but not from sector D, other things being equal.

		OH 8: The cost of equity effect for mandatory IFRS firms differs between the legal origins, and strong CBF and ICG, other things being equal.

Chapter 5 – Sample Design and Data Collection Process

As illustrated in the research questions and hypotheses detailed in the previous chapter, the selection of a relevant sample in IFRS research studies is an important element to provide reliable empirical results. In this chapter, the sample selection beyond the transition period will be examined and details of the data collection process will be discussed.

5.1 Sample Selection from the EU

This study follows Beuselinck et al. (2009) who argue that examining the influences from mandatory IFRS effects in European firms provides researchers with an unique setting because the EU capital markets are getting more integrated, there is a high degree of capital mobility and economic harmonization and cooperation are well developed. However, companies in the EU still have a certain level of variation in firm-specific factors and institutional environments, consequently implementing reporting incentives for such a one-size-fits-all IFRS set of standards may not be the same across countries and firms. To address this issue, this study uses financial statement data from the listed companies of the 18 EU member states where data is available from 2000 to 2009. This is different to other studies that examine the change of accounting standards through the implementation of IFRS in 2005. For instance, Li (2010) uses the data from 1998 to 2006, to test if the COE is reduced following mandatory IFRS adoption. Li's study, however, just has only two years post-mandatory data (i.e. 2005 and 2006).

As discussed earlier in previous Chapter 4 and to follow the approach used in prior studies (e.g. Li, 2010), each sample firm will be used as its own benchmark to compare any changes in their COE from before and after the mandatory IFRS adoption. Therefore, firms that do not have data available for both the pre- and post-mandatory IFRS adoption periods are excluded from the sample.

In addition, the practice that prior studies exclude financial institutions (i.e. those with four-digit Standard Industrial Classification (SIC) codes between 6000 and 6999) is followed (e.g. Hung 2001; Leuz et al. 2003; Francis & Wang 2008), mainly because banking, insurance, financial and credit institutions are subject to particular regulation and disclosure requirements, as well as the controversial issues in fair value reporting[13].

5.2 Database and Proxies

Different international accounting databases offer different coverage and characteristics of financial data for accounting research. Garcia Lara et al., (2006) argue that the choice of database has an effect on the results of empirical studies due to the differences in classification and measurement methods of samples from different databases. The data used in the thesis is obtained from the following sources: Compustat Global, Institutional Brokers Estimate System, and national levels of bureaucratic and administrative formalities from Institutional Profiles database (www.cepii.fr/ProfilsInstitutionels Database.htm).

The Compustat Global is normalized according to country accounting principles, disclosure methods and specific data item definitions and is the one used in the most recent IFRS research studies (e.g. Li, 2010). Therefore, this study uses Compustat Global as the primary source of data and which provides the best cover for European listed companies' accounting and financial information. As mentioned earlier, the main objective of this research is to test the IFRS effect on firms' COE under different reporting incentives covering a longer time periods following mandatory IFRS adoption than previous studies. Accordingly, data is available for the variables to be used in estimating the COE measures, including the dividend payout ratio and the book value of equity from 2000 to 2009, as well as other control variables used in the models.

[13] The literature discusses the controversial issues of IAS 39. Armstrong et al. (2008) argues that as the two provisions of IAS 39 prescribes the recognition requirements for financial instruments with fair values option and hedge accounting rules. Banking and insurance sectors responded with great resistance against such provisions because of their fluctuated market values of assets and liabilities. As a result, European Commission (EC) carved-out these two provisions of IAS39.

The Institutional Brokers Estimate System (I/B/E/S) is a global financial information business widely recognized as the premier source of global earnings estimates and other financial data. It contains the most comprehensive data on live, high-quality earnings expectations. Having been used by most IFRS research studies, I/B/E/S offers high-quality earnings forecasts by analysts. From the I/B/E/S database, analyst forecasts and price information for all EU public companies for the period 2000 to 2009 are extracted. Other inputs for the cost of capital estimation, including dividend payout ratio and book value of equity, are obtained from Compustat Global.

5.3 Identification of IFRS Adopting Firms

To test for the capital market effects from mandatory IFRS adoption, the practice of prior studies is followed (Luzi et al. 2007, Daske et al. 2007 and Kim and Shi 2007) that a conservative approach is more appropriate to classify IFRS firms, i.e. firms that adopt IFRS completely, not partially (e.g. IFRS with some EU or IASC/IASB guidelines). [14]

5.3.1 Stock Prices and Forecast Data as Proxies

To avoid look-ahead bias in the estimation of the COE, this study follows prior studies (e.g. Hail and Leuz, 2006; Li, 2010; Daske et al. 2007) that use accounting data for estimating earnings variables by estimating this seven months after the fiscal year-end in order to make sure that annual audited financial data are publicly available and incorporated in the stock price at the time of estimation.

5.4 Estimation of the COE: ex-ante implied cost of equity

In measuring the COE as the dependent variable, prior studies debate on whether an ex-ante (i.e. expected) metric or realized returns should be used in the calculation (e.g. Claus and Thomas, 2001; Gebhardt et al. 2001, etc.). With the limitations of not being able to capture the firms' risk measure, the literature in general supports the use of the expected return, proxied by analysts' earnings forecasts. The fundamental rationale is to estimate the ex-ante COE as the internal rate of return that equates the current stock price (e.g. Francis et al. 2005). To do this, financial data will be obtained from

[14] The literature identifies that different databases have inconsistent approaches in classifying levels of IFRS adopters. For instance, Worldscope classifies different levels of IFRS adoption by examining details of the firms' disclosures and financial reports, from a firm's reporting strategy as IFRS, partially compiled to fully compiled IFRS adoption. Kim and Shi (2007) argue that their significant association between IFRS adoption and cost of equity capital vs. the insignificant association done by Daske et al. (2007) is mainly because Daske et al. (2007) use a broader classification of IFRS adopters in their source of data, while Kim and Shi (2007) use a stricter classification (i.e. full adoption), suggesting that the full (partial) adoption is a more (less) credible factor.

Computstat and price, trading volume data, analyst forecasts and share price data from I/B/E/S.

Regarding the estimate of the ex-ante, expected COE, there are different calculation models used by prior studies. However, recent research by Hail and Leuz (2006) argues that alternative estimates from different models are highly correlated with each other and are identical within a reasonable range. Botosan and Plumlee (2005) compare the six most widely used measures of the COE based on financial analysts' forecasts and conclude that the target price method and the PEG ratio method perform the best. In addition, other researchers such as Kim and Shi (2007), Francis, et al. (2005) and Prather-Kinsey et al. (2008) also illustrate that the Easton (2004) price-earnings-growth (PEG) model is the most suitable to estimate the implied COE in their research papers.

In addition, Kim and Shi (2007) use the Easton (2004) PEG model to find that the COE is significantly lower for the full IFRS adopters than for the non-adopters, suggesting that the IFRS adopters benefit from greater and better disclosures via IFRS by having a lower cost of equity capital. This study therefore follows Hail and Leuz (2006) and Kim and Shi (2007) to use the Modified PEG ratio model developed by Easton (2004) as shown in Equation 5.3:

$$Coe_{PEG} = \sqrt{\frac{EPS_2 - EPS_1}{P_0}} \qquad \text{Equation 5.3}$$

Where:

Coe_{PEG} = ex-ante COE, where PEG refers to price-earnings growth model;

EPS_1 = the one-year ahead mean analysts' earnings forecast per share;

EPS_2 = the two-year ahead mean analysts' earnings forecast per share;

P_0 = the market price per share at fiscal year-end.

To calculate the COE, market price, dividend and analyst forecasts from I/B/E/S are substituted into Equation 5.3 and solved for the COE that equates the current stock price and the expected future earnings.

Concerning the share price at fiscal year-end (i.e. P_0 in Equation 5.3), this study follows the approach used by Francis et al. (2005) and applies the common stock price as of the firm-year observations' fiscal year ending date. According, for both EPS_1 and EPS_2, earnings forecasts available on I/B/E/S database as of consensus (i.e. mean) projected EPS in one-year ahead and two-year-ahead after the fiscal year-ending date are collected. In order to make the estimate for this study consistent in the valuation model and avoid any look-ahead bias, this study follows the literature and uses the share price at year-end plus 7 months in the COE calculation model to make sure audited financial statement data of each listed company in the sample is available after the fiscal year end. In addition, the two-year-ahead consensus earnings forecast exceed the one-year-ahead one; and any negative forecast of earnings will be removed from the database (Easton, 2004, Kim and Shi, 2007).

To summarize, the Modified PEG ratio model requires t+1 and t+2 forecasts of earnings per share and dividends per share. Therefore, to be included in calculating the COE, this study looks for:

(i) Each firm-years' current stock price data and analyst mean-consensus earnings forecasts for at least two periods ahead.
(ii) All necessary analyst mean-consensus earnings forecasts must be positive

To determine the influence of mandatory IFRS adoption on the COE will be tested by:

(1) Regressing the COE on:
    a. A dummy variable indicating the type of adopter (mandatory or voluntary adopter).
    b. A dummy equal to one when the firm-year observation falls in the post-mandatory (i.e. 2005 or later), and zero otherwise
    c. Any interaction between the dummies at (a) and (b) above.
    d. A set of (firm-specific and country-specific) control variables and interaction between variables.
    Following the literature review and basic theory from chapter 2 and 3, this study includes the sets of control variables that proxy firm-specific CBF, firm-specific ICG and country-specific IEF that are expected to influence the COE in mandatory IFRS adoption.

5.5 Full sample and Data Issues:

Li (2010) collects 6,456 firm-year observations from 1995 to 2006. With the longer time period used for this study, the full sample has more than 7,000 firm-year observations to estimate the pooled regression model, and uses data from the Computstat Global database for:

-18 EU countries
-2000 to 2009.

5.5.1 Sample Period Selection

This study follows the rationale of the prior study by Chen et al. (2009) that in 2000, IFRS is endorsed and recommended by the International Organization of Securities Commission (IOSCO, 2000) to allow foreign issuers to use IFRS for cross-border offerings. Thus, the sample covers the pre-mandatory period from 2000 to 2004 and the post-adoption period from 2005 to 2009 for the 18 EU countries in this study.

5.5.2 Issues with the Sample Data

During the data collection process, there are some outliers with extremely large and small continuous variables in the sample. Outliers may potentially create strong skewness in distributions which compromises the integrity of the regression models. For the large sample size used in this research, this study follows the literature and identifies univariate outliers with their respective numbers of standard deviation (i.e. Z score) with + - 3.0, or beyond. Prior studies state that usually there are a few techniques to handle outliers. The most common way is to delete all of them. However, this approach is not always desirable since the removal of extreme observations may reduce but not entirely correct for data integrity problem or distortions in the data. Thus, this study follows the literature (e.g. Li, 2010) and transform or winsorize all firm-level continuous variables at the top and bottom 1% of their distributions (i.e. 99% at the top and 1% at the bottom). Such adjustments to the observed data are able to mitigate the effects from outliers on the regression model analysis. Finally, the normal probability plots, scatter plots and histograms (not tabulated) are run to confirm that all continuous variables and residuals are reasonably normally distributed.

In addition, endogeneity may be a potential issue when the dependent variable, the COE, is observed for all observations in the sample data. It is because when the decision for firms to adopt IFRS mandatorily may be also correlated with some unobservable variable that also affects their COE. For example, prior researchers always points out that large-sized firms are more likely to adopt IFRS voluntarily, relative to small to medium-sized businesses (Daske et al. 2007). Therefore failure to control for this issue will yield an estimated mandatory effect on the COE that is downward biased.

To remedy the potential problem of endogeneity, this research study follows prior studies and applies the 2-stage least square (2 SLS) method. Consider a simple regression model:

$Y = \alpha + \beta X + \varepsilon$ Equation 5.4.

The following two stages are required to run the 2-stage SLS regressions:

1) OLS regress x on z and get predictions for x, say $x_{\wedge}$
2) OLS regress y on $x^{\wedge}$

In the first stage it is required to estimate the dependent variable as the likelihood of sample firms to select IFRS adoption mandatorily (Kim and Shi, 2007). Specifically, a dummy variable is used to predict the probability of being a mandatory adopter (i.e. 1 being mandatory adopter, otherwise 0). To implement this first stage, one or more instruments for x are included in the OLS regression. Then in the second stage, the variable from predicted mandatory adopters (derived from the first stage, i.e. $x^{\wedge}$) is included as an additional explanatory variable to control for potential endogeneity issue in the model. In addition, due to the fact that when the sample contains as many firms as possible from 2000 to 2009 in the EU, and the same company's data are included, measured and compared before and after the mandatory IFRS adoption period, technically there is no sample-selection bias issue.

After the sample design and data collection process, in the following chapter, this study continues to develop research models that perform various empirical tests and gather results for discussion.

Chapter 6 - Research Methodologies and Models

Having discussed the research propositions and data collection process in Chapter 4 and 5, this section aims at outlining the statistical methods used to collect the sample data and test all the above-mentioned research questions. In doing so, a set of regression models are developed to address the relevant empirical modeling issues.

6.1 Research Method

The methods used in international accounting research have been evolving in order to improve the robustness of the estimates, the representativeness of cross-sectional sources of data and the validity of data modeling. In this context, Tay and Parker (1990) investigate the research methodologies used in accounting harmonization and find that the major modeling issues stem from (1) sample selection, (2) data sources; and (3) the statistical methods used. From the review of the literature, these are the major reasons for researchers to come up with mixed and inconsistent empirical results in prior studies.

Recent international accounting literature (such as Barth et al. 2007) also stresses that findings from prior research studies comparing the quality of accounting between IFRS and domestic accounting standards are mixed, which could be due to the result of using different metrics, drawing data from somewhat different time periods, and using different control variables.

To overcome the issue of the lack of an appropriate benchmark for IFRS research (Hail and Leuz, 2007), this study follows the approach used by recent studies such as Li (2010) and Daske et al. (2007) and uses the same firm in the sample as the yardstick for comparison purposes. Specifically, when the same company is measured for changes in its COE in the post-mandatory period relative to the pre-mandatory period, it acts as its own benchmark for the effects of mandatory IFRS reporting.

To tackle the problem of the short-lived effects during the transition period, the data availability in the present study is maximized by including a five-year pre-mandatory period, from 2000 to 2004, and a similar post-mandatory one from 2005 to 2009. Hence, more data, especially in the post-adoption period, will be used to measure whether the COE effect from the mandatory IFRS adoption in the EU is transitory or permanent.

As mentioned in Chapter 3, managers can exercise their discretion on IFRS disclosure strategies based upon their own particular corporate characteristics. This study tests if firms' CBF is the initial dominant factor on the COE. Also as per prior studies, the relationship between institutional effects and managers' incentives on IFRS adoption and disclosure strategy will be examined. To do this, three different research models are developed and these incorporate all three forces as proxies of reporting incentives for mandatory IFRS adopters in order to investigate if there are significant individual and combined effects on the COE.

6.2 Use of regression models

Multiple regression techniques are a very useful method in research that allow several variables to predict the values for a quantitatively measured dependent variable. As a method, it provides insights to help researchers explain the dynamics underlying a particular construct by indicating which combination of variables may be strongly associated with it (Meyers et al. 2006). In doing so, the model that emerges from the analysis can serve both in an explanatory as well as a predictive function. To illustrate the variables of a multiple regression model, consider the following:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1 X_2 + \varepsilon \qquad \text{Equation 6.1}$$

Equation 6.1 presents that Y is the dependent, the β's are the regression coefficients for the corresponding X (independent) terms, where α is the constant or intercept, and ε is the error term reflected in the residuals. Both the dependent variable (Y) and the independent variables (X's) are the predicted variable and predictor variables respectively assumed to be continuous, interval variables. The X_1X_2 variable is an interaction term that incorporates the joint effect, that is either a complementary or substitute effect of the two variables X_1 and X_2 on a dependent variable over and above their separate effects. An example of such an interactive effect would be the way a person's experience and education would complement each other in relation to the individual's income. In the context of the present research on firms mandatorily adopting IFRS, multiple regression models are useful to determine which variable(s) of a larger set is (are) better predictor/explanation of some criterion variable than others. More importantly, multiple regression models can statistically examine the relationship of one variable with a set of other variables, which is appropriate for measuring any COE effects from mandatory IFRS adoption and reporting incentives.

Recently, some prior IFRS studies apply the Structural Equation Model (SEM) to construct many unobservable variables (Guerreiro et al., 2008 and Landsman et al., 2011). However, SEM mainly focuses on explaining phenomena rather than a model predicting specific empirical outcomes from variables such as Ordinary Least Square (OLS) models. Moreover, SEM in IFRS research studies may suffer from possible measurement errors. This happens when the sample size is less than the required large number of observations that the approach requires (Steenkamp and Baumgartner, 2000). While SEM can address the problems of unobservable variables it needs a large number of observations, for this study—which has limited data—OLS is the appropriate method on technical grounds. Therefore, when multiple regression models allow several individual and inter-related variables to predict the values for a quantitatively measured dependent variable, it is more suitable to use multiple-regression modeling techniques to test the effect of COE along mandatory IFRS adoption when examining the variation in the explanatory proxy variables CBF, ICG and IEF and their interactions.

6.3 Potential modeling issue

Prior studies on voluntary IFRS adoption primarily select samples of firms which willingly implement IFRS based on particular firm characteristics. This may lead to self-selection bias and consequently affects any findings (e.g. Harris and Muller, 1999). However, when this study focuses on mandatory IFRS adoption, all EU firms in the post-2005 period have to adopt IFRS as their accounting standards; therefore, there should not be any self-selection bias issue in the sample.[15]

As discussed in Chapter 5, when most prior studies apply regression models to examine if and how IFRS adoption (the independent variable) influences any economic consequences such as the COE (the dependent variable), one should be cautious in drawing empirical conclusions due to the fact that the COE effect may influence firms decision to adopt IFRS mandatorily. Therefore, there may be an endogeneity issue in the regression. To resolve the potential problem, this study follows the literature by using a two-stage-least squares (2 SLS) regression modeling method (Ashbaugh and Pinus, 2001). In the first stage, the likelihood of a firm's decision to become mandatory IFRS adopters is predicted using certain instrumental variables such as size, leverage

[15] Self-selection bias should not be an issue for mandatory IFRS studies. For example, Li (2010) applies the Heckman (1979) two-stage regression procedure to control for the self-selection effect and finds evidence that the empirical results are quantitatively similar for the sample without the transition period.

and profitability. Then, this predicted dependent variable derived from the first stage will replace the dummy variable of mandatory IFRS adopters in the second stage regression model. In doing so, the endogeneity problem can be controlled for and a better independent variable included to test the impacts on the desired dependent variable (Li, 2010, Soderstrom and Sun, 2007).

With more disclosures available following the mandatory adoption of IFRS, capital markets will eventually be able to differentiate the financial reporting and disclosure practices from managers' incentives, and this will lead to a change in firms' COE (Daske et al. 2007). As a result of differing incentives, the reduction in information asymmetry from IFRS financial reporting will vary among firms. When investors recognize such difference in reporting transparency, they will react by corresponding changes in the required COE. Thus, with more data available and better proxies, this study will achieve the objectives that (i) it is more evident to discern winners or losers from IFRS adoption by their COE effect; and (ii) it is also possible to validate, compare and contrast with prior findings (e.g. Daske et al. 2007; Hail and Leuz, 2006; Li, 2010). Moreover, a longer series of data allows both firms and analysts to learn how to comply with the new standards and eventually to materialize the benefits of mandatory IFRS adoption (e.g. Cuijpers and Buijink (2005). Therefore, the present research will provide more reliable empirical results than prior papers that focus on the immediate post-adoption period (Hail and Leuz, 2006).

In order to control for the above-mentioned modeling issues, the following section discusses the details of the two-stage regression models, as well as the explanations of related variables.

6.4 Empirical Models and Potential Specification Errors

To test the hypotheses and to address those potential sample data issues mentioned in the previous sections, the following regression models are developed to gather evidence to support the following research questions.

6.4.1 Regression Models and Hypotheses

1st Stage:

As discussed, before testing for the first stage of research hypothesis, it is necessary to control for the potential endogeneity issue by performing the 2-SLS test. Accordingly, the following Tables 6.1 and 6.2 are constructed.

Table 6.1
First stage regression model to develop the Possible Mandatory Adopters (PMAdopters)

This model is developed to control for the possible endogeneity issue in estimating the effect of mandatory IFRS adoption

PMAdopters = β0 + β1Size +β2(Log of BM) + β3(ROE) + country dummy variables + industry dummy variables + year dummy variables + error terms	Equation 6.2
Equation 6.2 is composed of the following variables:	
1. PMAdopters: a dummy variable is used to predict the probability of being a mandatory adopter (i.e. 1 being mandatory adopter, otherwise 0);	
2. Size = Firms' size, calculated by the natural logarithm of total assets as of year-end;	
3. Log of BM = Log of Book-to-Market ratios for each firm-year observation as of year-end;	
4. ROE = Return on Equity calculated as the ratio of Earnings Before Interest Tax (EBIT) to Common Equities as of year-end for each firm year observation;	
5. Country dummy variables = All18 EU countries dummy (=1 if yes, 0 otherwise);	
6. Industry dummy variables = Industry dummy specified by sectors determined by Standard & Poor (If yes =1, 0 otherwise);	
7. Year dummy variables = Year dummies from 2000 to 2009 (=1 if yes, 0 otherwise).	

As illustrated in Equation 6.2, in the first stage, instrumental variables for size, ROE and book-to-market ratios are included that are seen to be most likely to influence firms' decisions to become mandatory adopters (e.g. Barth et al. 2005), As a result, the instrumental variable predicted mandatory IFRS adopter called Possible Mandatory IFRS Adopters (PMAdopters) is estimated in order to capture the likelihood of becoming a mandatory IFRS adopter for each firm-year observation. Similar to prior studies, country dummies are included to control for differences of cross-country factors that may be important to mandatory IFRS adoption, and with year dummies and industry dummies to control for the year and industry fixed effects.

In the second stage, the PMAdopters (derived from the 1st stage) are included as an additional explanatory variable in the research model to control for potential endogeneity problems associated with the feedback response between mandatory adoption and the COE. Therefore, Equation 6.3 becomes the main regression model to perform all operating hypotheses stipulated in Table 4.1.

Table 6.2

Second stage regression model to include the Possible Mandatory Adopters (PMAdopters)

This model is derived from Table 6.1 in estimating the cost of equity effect from mandatory IFRS adoption

2nd Stage:
COE = β0 + β1PMAdopters + Control variables + Firm-specific CBF variables + Firm-specific ICG variables + Country-specific IEF variables + Real GDP Growth + Stock Market Capitalization + Industry Dummies + Year Dummies + Country Dummies + error terms Equation 6.3
Where:
1. COE_{PEG} = ex-ante cost of equity, where PEG refers to price-earnings growth model;
2. Control variables include:
Size = Firms' size, calculated by the natural logarithm of total assets as of year-end;
Log of BM = Log of Book-to-Market ratios for each firm-year observation as of year-end;
ROE = Return on Equity calculated as the ratio of Earnings Before Interest Tax (EBIT) to Common Equities as of year-end for each firm year observation;
3. Firm-specific CBF = Sum of seven key dummy variables (i.e. max. = 7) to proxy for each firm-year observation's particular characteristics as Core Business Factor to reporting incentives. Thus, each variable of dummies equals one if any firm-year observation's CBF is above average for it is in larger size, more equity-based capital structure, more profitable, higher TobinQ, larger market value of equity, more capital-intensive assets and more analysts followed.
4. Firm-specific ICG variables = Deminor Corporate Governance score to proxy for firms' internal corporate governance (ICG) quantity and quality rating for firms of each country. Deminor CG Score based on FTSE Eurotop 300 companies with a grid consisting of over 300 corporate governance criteria. The maximum score is 40.

5. Country-specific IEF variables have two different proxies: 8.A and 8.B
5.A1 Legal Origin - GO = GO means German-origin countries (La Porta et al. 2002)
5.A2 Legal Origin - FO = FO means French-origin countries (La Porta et al. 2002).
5.A3 Legal Origin - SO means Scandinavian-origin countries (La Porta et al. 2002)
5.A4 Legal Origin - BO means British- origin countries (La Porta et al. 2002)
5.B1 Sector A: Public Institutions & Civil Society= Composite scores measured areas of political institutions; security, law & order; and functioning of public administration.
5.B2 Sector B: high business activities: Composite scores captured areas of functioning and regulations of goods/services market; security of transactions & contracts; and openness to outside world.
5.B3: Sector C: high capital activities which is the composite indices measured areas of capital market functioning;
5.B4: Sector D: high labor/social activities which are the composite scores measured the level of labor market and labor relations; social cohesion and social mobility.
Note of 5.B1 to 5.B4: All these composite scores are extracted from Profiles of Institutional Characteristics of 85 Developed & Developing Countries in 2010
6. Country dummy variables = All 18 EU countries dummy (=1 if yes, 0 otherwise);
7. Industry dummy variables = Industry dummy specified by sectors determined by Standard & Poor (If yes =1, 0 otherwise); and
8. Year dummy variables = Year dummies from 2000 to 2009 (=1 if yes, 0 otherwise).

6.3.2 Specification Error Test (RESET) for 2 SLS Omitted Variables Problems

When various functional variables are specified in the regression model, prior studies highlight that another possible issue for running 2 SLS is the potential specification errors when an independent variable in the regression model is correlated with the error term. The two possible causes for specification errors are incorrect functional form and a variable omitted from the model which may have a relationship with both the dependent variable and one or more independent variables. Pesaran and Taylor (1999) propose to use the RESET general specification error test for appropriate functional form and/or omitted variables in the 2 SLS regression model. If the 2 SLS model functions well, the predicted variable of mandatory adopters derived in the first stage from the model should not have any explanatory power in the original OLS model. In order to perform the RESET for the 2SLS, basically, it is necessary to create another variable which is computed from squaring the forecasted variable in the first stage OLS regression and test if it has any significance.

6.3.3 Control for potential multicollinearity issues in independent variables

In multivariate regression models, multicollinearity is a condition that exists when two and more than two predictor (independent) variables correlate very strongly. Predictors with multicollinearity would distort the interpretation of multiple regression results because the variables are largely confounded with one another. That is, they are essentially measuring the same characteristics. As such, it would be difficult to know which of the two is the more relevant. To control for this problem, all independent variables in the regression model (Table 6.2) will be tested with (i) tolerance parameter and (ii) variance inflation factor (VIF). A tolerance parameter for each independent variable of 0.1 or below and a VIF for each independent variable of more than 10 will be considered to be problematic.

Specifically, a 2SLS model is used to control for potential endogeneity issue. To improve the reliability of the model due to problems from omitted variables, a RESET test is conducted. In addition, tolerance parameter and VIF tests are used to remedy the potential multicolinearity issues for the predictor variables. The next few chapters present the empirical results for all the hypotheses discussed earlier, together with the various descriptive, univariate and multivariate tests.

Chapter 7 – Sample Data Distribution and Correlation Analysis

In the previous chapters this study progressively introduces and argues the importance of the IPOO model in examining the reporting incentives for mandatory IFRS adoption, as well as the data and research methodology to test those hypotheses. Chapters 7 to 10 detail the empirical tests and results from the various descriptive and inferential statistics that hypothesized in the earlier chapters. In this chapter, univariate and correlation analysis for the variables in the sample distribution will be introduced. In Chapter 8, evidence on both the descriptive statistics and the 2-stage OLS model illustrating any differences of the average COE between voluntary and mandatory adoption will be presented. Then, it will be followed in Chapters 9 and 10 where a comprehensive multivariate analysis from the different empirical models that test for the differential COE effects from both individual and interactions among CBF, ICG and IEF. Also, an additional analysis on the effects of specific IEF to the COE will be evaluated as well.

7.1 Sample Distributions and Country-level Descriptive Statistics

Table 7.1 Panel A reports the sample country distribution of IFRS adoption between full sample adopters, early and voluntary IFRS adopters, and mandatory IFRS adopters. There are a total of 7,294 firm-year observations gathered from 18 EU countries for the period 2000 to 2009 that fulfill the criteria of data collection, as discussed in the previous chapters. As expected, Germany has the highest percentage of early and voluntary IFRS adopters, followed by France. Since the U.K. had a policy of not allowing voluntary IFRS adoption only, it has the largest percentage of mandatory IFRS adoption.

In addition, Table 7.1 Panel B describes the average cost of equity (COE) for different IFRS adopting firms by EU country. It shows that voluntary IFRS adopters have 12.25% average COE, ranging from the lowest 7.84% (Czech Republic) [16]to the highest 13.64% (Hungary). Mandatory adopters, however, have an average COE of 12.13%, which is only 0.12% lower than that of the voluntary adopters. Thus, the preliminary results show that there is not much difference in the average COE between mandatory and voluntary adopters.

[16] However, the lowest average cost of equity is computed from Czech Republic, which represents the smallest sample size in all 18 E.U. state members.

7.2 Outliers in the data

Outliers are observations that have extreme values relative to other data and are considered to be potentially erroneous. .

In Section 5.5.2, it points out that the issue of outliers of data may potentially bias and distort estimates of the COE for multiple regression models. To maintain the data integrity, it is essential to resolve the issue of outliers. Prior studies show that outliers can be measured by the extent of the distribution's kurtosis. Thus, this study follows the literature of IFRS studies to (1) identify univariate outliers with their respective numbers of standard deviation (i.e. Z score) with +/-3.0 or beyond. Then, (2) Winsorize all firm-level continuous variables at the top and bottom 1% of their distributions (i.e. 99% at the top and 1% at the bottom). After that, (3) re-run the descriptive statistics and find that the COE has a skewness of 1.3, while most of the other variables lie between +1 and -1. Accordingly, by truncating the data and removing outliers, the COE is now acceptable for regression analysis.

Table 7.1 Panel A: Sample Distributions and Country-level Descriptive Statistics: Country Level Distribution by IFRS Adopters

This Table illustrates the distribution of sample countries in accordance to Early/Voluntary & Mandatory Adopters for the full period, and the pre- and post-mandatory adoption periods.

	Both Early / Voluntary & Mandatory IFRS Adoption In the Full Adoption Period (2000 to 2009)		**Early / Voluntary IFRS Adoption in Pre-Mandatory Adoption Period (2000 to 2004)**		**Mandatory IFRS Adoption in Post-Mandatory Adoption Period (2005 to 2009)**	
	N	**% adopting IFRS**	**N**	**% adopting IFRS**	**N**	**% adopting IFRS**
Austria	159	2.18%	112	8.70%	47	0.78%
Belgium	296	4.06%	89	6.92%	207	3.45%
Czech Republic	11	0.15%	11	0.85%	0	0.00%
Denmark	246	3.37%	50	3.89%	196	3.26%
Finland	399	5.47%	54	4.20%	345	5.74%
France	958	13.13%	139	10.80%	819	13.63%
Germany	1264	17.33%	729	56.64%	535	8.91%
Greece	130	1.78%	22	1.71%	108	1.80%
Hungary	12	0.16%	12	0.90%	0	0.00%
Ireland	83	1.14%	0	0.00%	83	1.38%
Italy	342	4.69%	0	0.00%	342	5.69%
Luxembourg	16	0.22%	7	0.54%	9	0.15%
Netherlands	174	2.39%	0	0.00%	174	2.90%
Poland	41	0.56%	20	1.55%	21	0.35%
Portugal	101	1.38%	0	0.00%	101	1.68%
Spain	289	3.96%	37	2.87%	252	4.20%
Sweden	471	6.46%	17	1.32%	454	7.56%
United Kingdom	2302	31.56%	47	0.00%	2268	38.05%
	7294	**100.00%**	**1333**	**100.00%**	**5961**	**100.00%**

Table 7.1 Panel B: Sample Distribution and Country-level Descriptive Statistics – Country Level Distribution by Average Cost of Equity of IFRS Adopters

This Table illustrates the COE for sample countries by Early/Voluntary & Mandatory Adopters for the full period, and the pre- and post-mandatory adoption periods.

	Both Early / Voluntary & Mandatory IFRS Adoption	**Early / Voluntary IFRS Adoption**	**Mandatory IFRS Adoption**
	In the Full Adoption Period (2000 to 2009) N=7294	**in Pre-Mandatory Adoption Period (2000 to 2004) N=1333**	**in Post-Mandatory Adoption Period (2005 to 2009) N=5961**
	Cost of Equity	**Cost of Equity**	**Cost of Equity**
Austria	12.46%	12.58%	12.19%
Belgium	12.06%	11.91%	12.12%
Czech Republic	7.84%	7.84%	0.00%
Denmark	12.56%	13.16%	12.41%
Finland	13.66%	12.03%	13.92%
France	11.75%	11.07%	11.86%
Germany	12.96%	12.64%	13.39%
Greece	12.14%	11.28%	12.31%
Hungary	13.64%	13.64%	0.00%
Ireland	11.00%	0.00%	11.00%
Italy	11.96%	0.00%	11.96%
Luxembourg	14.04%	10.84%	16.52%
Netherlands	12.27%	0.00%	12.27%
Poland	12.05%	11.27%	12.79%
Portugal	11.06%	0.00%	11.06%
Spain	10.13%	11.23%	9.97%
Sweden	12.68%	12.25%	12.70%
United Kingdom	11.83%	11.87%	11.83%
Average	**12.15%**	**12.25%**	**12.13%**
Median	**10.84%**	**10.98%**	**10.82%**
Standard Deviation	**5.45%**	**5.27%**	**5.49%**

7.3 Univariate Data Analyses by IFRS Adopters

Table 7.2 presents the descriptive characteristics for the variables used in the empirical models. A t-test is conducted to estimate any mean differences for the variables between early/voluntary and mandatory IFRS adopters. As shown, though the mandatory adopters have a slightly lower average COE, the t-test result between the full sample's IFRS adopters (at 12.15%), the early/voluntary adopters (at 12.25%) and the mandatory adopters (at 12.13%) indicates that this is not statistically significant..

Comparing firm-specific characteristics between early/voluntary and mandatory adopters for significant differences, Table 7.2 also shows that mandatory adopters are usually smaller-sized, a little less levered, have smaller amount of market value of common equity, are more profitable, have higher returns to common equity, followed by fewer number of analysts and have lower overall composite CBF scores.

From the internal corporate governance perspective, mandatory adopters have significantly higher Deminor CG scores, more independent audit committees and lower ownership concentration relative to voluntary adopters. It suggests that mandatory adopters are usually better governed internally by boards of directors than those of voluntary counterparts. For specific IEF, mandatory firms belong to those with higher exchange disclosure requirements and investor protection, even though they are a little less in securities regulations. Since more established capital markets will require more stock market exchange disclosure for companies, this results correspond with the fact that most mandatory adopters belong to those countries with high level of capital market activities (i.e. Sector C) in institutions' bureaucratic and administrative formalities

For legal origins, as expected from the previous discussion, most mandatory firms are British (BO) and French (FO), while voluntary IFRS firms are mainly from Germany (GO).

Table 7.2 Descriptive Statistics of CBF, ICG and IEF by IFRS Adopters and Variables Definition

Univarite Data Analysis by IFRS Adopters

This table provides summary statistics for the COE, CBF, ICG and IEF variables broken down by All IFRS Adopters, Early/Voluntary Adopters and Mandatory Adopters for the full period, and the pre- and post-mandatory adoption periods.

	ALL IFRS Adopters In the Full Adoption Period (2000 to 2009) N=7294			Early / Voluntary IFRS Adoption in Pre-Mandatory Adoption Period (2000 to 2004) N=1333			Mandatory IFRS Adoption in Post-Mandatory Adoption Period (2005 to 2009) N=5961				
Dependent Variable	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Test for Mean differences	
Cost of Equity	12.15%	10.84%	5.45%	12.25%	10.98%	5.27%	12.13%	10.82%	5.49%	-0.724	
Proxies for Core Business Factors (CBF)											
Size	2.813	2.729	0.986	3.072	3.029	1.026	2.755	2.692	0.967	-10.701	***
Leverage	0.560	0.575	0.179	0.568	0.585	0.171	0.558	0.574	0.180	-1.962	**
Common Equity (log)	2.694	2.628	0.915	2.911	2.876	0.949	2.646	2.586	0.901	-9.624	***
Book-to-Market Ratio	2.117	0.509	10.114	2.363	0.549	10.350	2.062	0.498	10.061	-0.967	
ROA	0.078	0.075	0.084	0.073	0.068	0.083	0.079	0.077	0.084	2.339	**
ROE	0.216	0.201	0.267	0.197	0.189	0.243	0.221	0.203	0.272	2.941	***
Analysts	8.190	5.500	7.625	10.715	7.500	8.949	7.626	5.000	7.176	-13.540	***
Capital Intensity	0.248	0.191	0.210	0.252	0.219	0.193	0.247	0.186	0.214	-0.660	
Debt-to-Equity Ratio	1.852	1.354	1.857	1.844	1.408	1.682	1.854	1.348	1.894	0.182	
Tobin-Q	2.607	1.355	5.270	2.703	1.296	5.400	2.586	1.374	5.241	-0.720	
Overall CBF Score	3.491	3.000	1.668	2.377	2.000	1.393	2.093	2.000	1.302	-5.558	***

Proxies for Internal Corp. Governance (ICG)											
Deminor CG score	24.470	22.440	5.012	20.882	20.320	2.573	25.246	23.440	5.073	29.983	***
Ownership Concentration	37.027	38.900	13.930	50.683	55.600	8.971	34.061	29.200	13.018	-43.664	***
Board Independence	37.620	35.000	18.623	38.079	44.000	15.645	37.521	35.000	19.206	-0.974	
Chair&CEO Separation	87.111	97.000	19.141	90.595	100.000	18.454	86.358	97.000	19.206	-7.211	***
Audit Committee Independence	33.598	22.000	26.588	10.698	4.000	14.155	38.552	26.000	26.049	37.131	***
Proxies for Institutional Environment Factors (IEF)											
Stock Exch. Disclosure	0.640	0.670	0.178	0.472	0.420	0.145	0.676	0.750	0.164	41.400	***
Investor Protection	59.257	52.530	21.625	46.982	41.650	12.539	61.912	79.120	22.254	23.244	***
Securities Regulations	86.396	97.000	19.257	87.765	100.000	19.277	86.100	97.000	19.242	-2.804	***
Legal Origin - GO	0.204	0.000	0.403	0.663	1.000	0.473	0.101	0.000	0.302	-54.667	***
Legal Origin - FO	0.316	0.000	0.465	0.221	0.000	0.415	0.338	0.000	0.473	8.338	***
Legal Origin - SO	0.153	0.000	0.360	0.091	0.000	0.287	0.167	0.000	0.373	7.002	***
Legal Origin - BO	0.327	0.000	0.469	0.026	0.000	0.158	0.394	0.000	0.489	27.235	***
Sector A: Public Institutions & Civil Society	6.040	6.210	0.243	6.085	6.210	0.160	6.030	6.210	0.251	-7.558	***
Sector B: high business activities	6.066	6.190	0.266	6.058	6.230	0.233	6.068	6.120	0.273	1.179	
Sector C: high capital activities	6.123	6.150	0.395	5.890	5.800	0.257	6.175	6.190	0.402	24.641	***
Sector D: high labor/social activities	6.005	5.920	0.415	6.340	6.570	0.418	5.931	5.920	0.376	-35.139	***

**** and *** = 5% and 1% levels of significance**

Variable definitions & data sources:

Cost of Equity:	Measured by Eatson (2004) model (IBES).
Size:	Natural log of total assets (CompuStat Global)
Leverage:	Ratio of total debts to total assets
Common Equity:	Natural log of market values of common equity (IBES, CompuStat Global)
Book-to-Market:	Ratio of total Book Values of Common Equities to Market Values of Common Equities (IBES, CompuStat Global)
Return to Assets (ROA)	Ratio of EBIT to Total Assets (IBES, CompuStat Global)
Return to Equity (ROE)	Ratio of EBIT to Common Equities (IBES, CompuStat Global)
Analysts:	Average # of analysts covering the firm in two forecasted EPS periods (IBES, CompuStat Global)
Capital Intensity:	Ratio of PP&E (net) to Total Assets
Tobin-Q:	Ratio of (Total Assets - Common Equity Book Value - Market Value of Common Equity) to Total Assets (CompuStat Global)
Overall CBF Score:	Sum of following seven dummy variables which are proxies for higher CBF (if > average=1, otherwise 0): -Larger size -More equity-based capital structure -More profitable (i.e. higher than average ROE) -Higher Tobin-Q -Larger market value of common equity -More capital intensity -More Analysts followed
Deminor CG Score:	Average company corporate governance rating per country as per 2003 obtained from Deminor Corporate Governance Index. Deminor CG Score based on FTSE Eurotop 300 companies with a grid consisting of over 300 corporate governance criteria. The maximum score is 40.
Ownership Concentration	Composite index developed by Heidrick & Struggles, Corporate Governance Report, 2009, European Department, International Monetary Fund
Board Independence	Composite index developed by Heidrick & Struggles, Corporate Governance Report, 2009, European Department, International Monetary Fund
Chair&CEO Separation	Composite index developed by Heidrick & Struggles, Corporate Governance Report, 2009, European Department, International Monetary Fund
Audit Committee Independence	Composite index developed by Heidrick & Struggles, Corporate Governance Report, 2009, European Department, International Monetary Fund

Stock Exch. Disclosure	Exch. Disclosure index represents the strength of a country's stock exchange-mandated disclosures ranging from 0 to 1.
Investor Protection	A composite score measured by combing three indices pertaining to investor protection: anti-director rights, efficiency of judicial system and rule of law (La Porta et al., 1998, 2002)
Securities Regulations	Securities regulations is a composite index to average the three indices: disclosure requirement index, liability standard index and public enforcement index (Hail and Leuz, 2006; Kim and Shi, 2007)
Legal Origin - GO	GO means German-origin countries (La Porta et al. 2002)
Legal Origin - FO	FO means French-origin countries (La Porta et al. 2002).
Legal Origin - SO	SO means Scandinavian-origin countries (La Porta et al. 2002)
Legal Origin - BO	BO means British-origin countries (La Porta et al. 2002)

Sector A: Public Institutions & Civil Society	Composite scores measured areas of political institutions; security, law & order; functioning of public administration and etc.
Sector B: high business activities	Composite scores captured areas of functioning and regulations of goods/services market; security of transactions & contracts; openness to outside world & etc.
Sector C: high capital activities	Composite indices measured areas of capital market functioning;
Sector D: high labor/social activities	Composite scores measured the level of labor market and labor relations; social cohesion & social mobility & etc. All these composite scores are extracted from Profiles of Institutional Characteristics of 85 Developing & Developing Countries/2010 (http://www.cepii.fr)

7.4 Descriptive Statistics of variables by Legal Origins

The descriptive statistics test is performed in two steps. First, the following Table 7.3 presents the general distribution of the sample by the four distinct legal origins, German origin (GO), French origin (FO), Scandinavian (SO) and British origin (BO) (La Porta et al. 1991). As Table 7.3 indicates, most EU countries belong to French origin (FO), followed by German origin (GO), with only two countries Ireland and the United Kingdom in British origin (BO).

Table 7.3 Country Sample Distribution by Legal Origins

This table introduces the sample country distribution by the nature of their legal origin.

German Origin (GO)	French Origin (FO)	Scandinavian Origin (SO)	British Origin (BO)
Austria Czech Republic Germany Hungary Poland	Belgium France Greece Italy Luxembourg Netherlands Portugal Spain	Denmark Finland Sweden	Ireland United Kingdom

The second step is to conduct a detailed and comprehensive descriptive statistic test for the COE variables and proxies for Core Business Factors (CBF) by legal origins. Table 7.4 gives these results for COE, CBF, ICG and IEF grouped by legal origins. For the average COE, it highlights that even though French firms have the lowest average COE (at 11.66%) for the full sample period, it shows the least reduction in the average COE between the pre- and post-mandatory period (by -0.1%), while German firms (GO) have the second highest average COE for the full sample period, but has greatest reduction (by -1.53%), followed by British firms (BO) (by -0.76%).

Table 7.4 also presents IFRS firms' characteristics (CBF) by legal origins. As shown, even though Scandinavian (SO) adopters are reported as the largest and most profitable, they have the second lowest return on equity and the lowest long-term growth. This is an interesting result. SO firms are larger and more profitable than the sample as a whole and have the highest average COE for the full sample period but only the second least reduction in their average COE between the pre- and post- mandatory periods. This suggests that there may not be an automatic link of such firm characteristics with the benefits of lowering the average COE by such firms. On the other hand, British (BO) IFRS adopters employ the largest amount of capital assets in their business (i.e. have the largest capital intensity ratio), have the second highest in return to common equity and but are second lowest in terms of leverage. This indicates they rely more in relative on equity. In turn this may result in enhancing the incentives for British firms (BO) in mandatory IFRS adoption.

Contrary to Scandinavian (SO) firms, German (GO) firms enjoy the greatest reduction in the average COE even though they have the lowest level of profitability and are second smallest-sized. On the other hand, Germany (GO) adopters have the largest number of voluntary IFRS adopting firms (56.64% of the total from Table 7.1 Panel A). With a lot of differences between German local accounting standards (HGB) and IFRS, such largest number of voluntary adopters may attract the largest number of analysts to follow. Similar to Scandinavian (SO), French origin (FO) adopters are on average the second largest-sized and have second largest market value of common equity but have the lowest reduction in the average COE. Moreover, French (FO) firms have the largest book-to-market ratio and debt-to-equity ratio, and highly leveraged in their capital structure.

For IEF conditions, British (BO) firms, with long-established equity capital markets, have the most developed investor protection mechanisms and stock exchange disclosure requirements. However, French (FO) firms are operating in a mixed institution setting where they have the lowest investor protection but the second highest stock exchange disclosure. On the other hand, Germany (GO) IFRS adopters' have the lowest stock exchange disclosure and the second lowest investor protection, implying that their reduction in their average COE may be primarily attributable to the firms' CBF rather than IEF factors.

From the administrative formality perspective, British (BO) firms have the highest Sector A (high level of public institutions and civil society), Sector B (high level of business activities) and Sector C (high level of capital market activities) relative to German (GO) firms, which have a focus on Sector D (high level of labor and social activities). In addition, British (BO) firms have the highest ICG comprehensive results, lowest ownership concentration, as well as highest level of audit committee independence.

The above descriptive statistics highlight the importance of British (BO) IFRS adopters' strong IEF and Germany (GO) firms' strong CBF which may constitute the underlying drivers for high reporting incentives in adopting IFRS that relate to the post-adoption reduction in their average COE.

In addition to the above-mentioned analysis of the descriptive statistics given in Table 7.4, Table 7.5A and B below provide the results of correlation between all the variables.

Table 7.4: Descriptive Statistics by legal Origins, CBF, ICG and IEF sample distribution by Legal Origins

This table provides a breakdown for COE, CBF variables, ICG and IEF in accordance to firms' legal origin.

Legal Origin	**BO**			**FO**			**GO**			**SO**			**Total**		
N	2385			2306			1487			1116			7294		
%	32.70%			31.62%			20.39%			15.30%			100.00 %		
Cost of Equity	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
Full sample period	0.118	0.1032	0.0555	0.1166	0.1063	0.0502	0.1285	0.1157	0.0558	0.1298	0.1177	0.05698	0.1215	0.1084	0.05446
Pre-mandatory Period	0.1223	0.1072	0.0588	0.1172	0.1075	0.0472	0.1369	0.1209	0.0609	0.1334	0.1206	0.0575	0.1254	0.1113	0.0562
Post-mandatory Period	0.1147	0.1007	0.0525	0.1162	0.1054	0.0525	0.1216	0.1102	0.0502	0.1266	0.1158	0.0564	0.1183	0.1061	0.0528
Difference in post- & pre period	**-0.0076**			**–0.001**			**-0.0153**			**-0.0068**			**-0.0071**		
Proxies for Core Business Factors (CBF)															
Firm-size	2.4109	2.3187	0.923	3.0243	2.9008	0.9245	2.8327	2.6758	1.0148	3.2046	3.2174	0.8957	2.813	2.729	0.986
Leverage	0.5428	0.5522	0.1941	0.5966	0.616	0.1637	0.561	0.5808	0.1821	0.518	0.5384	0.1536	0.560	0.575	0.179
Common Equity (log)	2.3739	2.3253	0.8822	2.8074	2.6891	0.8218	2.6575	2.5825	0.9244	3.1956	3.1786	0.884	2.694	2.628	0.915
Book-to-Market Ratio	1.0903	0.4649	5.453	3.388	0.5239	13.9287	2.8898	0.5853	12.1112	0.6489	0.4725	0.64	2.117	0.509	10.114
ROA	0.0798	0.0797	0.0896	0.0784	0.0714	0.0681	0.0679	0.0667	0.0908	0.0887	0.0859	0.09156	0.078	0.075	0.084
ROE	0.2312	0.2026	0.3199	0.2347	0.2139	0.2144	0.1793	0.1804	0.2742	0.1957	0.1948	0.224	0.216	0.201	0.267
Analysts	6.131	4	5.985	9.2045	7	7.7358	9.7751	6	9.2528	8.3926	6	7.1596	8.190	5.500	7.625
Capital Intensity	0.2588	0.1822	0.2369	0.237	0.1808	0.1961	0.2423	0.2066	0.1857	0.2561	0.2126	0.2088	0.248	0.191	0.210
Debt-to-Equity Ratio	1.9133	1.2331	2.2585	2.0291	1.6042	1.6854	1.8725	1.3847	1.8513	1.3303	1.1662	0.9235	1.852	1.354	1.857
Tobin-Q	2.6763	1.429	5.4064	2.4604	1.2848	5.207	2.9811	1.266	6.3041	2.2679	1.5044	3.1335	2.607	1.355	5.270
Overall CBF Score	2.5052	2	1.4953	2.82	3	1.5762	2.7747	3	1.6041	3.3827	3	1.5025	3.491	3.000	1.668

Proxies for Internal Corporate Governance (ICG)

	BO			FO			GO			SO			Total		
Deminor CG score	30.98	31.02	0.2108	21.52	22.4	2.9672	20.1859	20.32	0.3782	22.0851	22.44	2.54266	24.470	22.440	5.012
Ownership Concentration	21.3376	21	1.7781	44.8898	45.2	6.2121	55.8011	55.6	0.5673	30.3458	29.2	4.763	37.027	38.900	13.930
Board Independence	35.1044	35	0.5499	24.3786	29	20.6028	40.3127	44	10.4	66.7305	68	1.4823	37.620	35.000	18.623
Chair&CEO Separation	96.4432	97	2.933	63.1035	63	17.1458	100	100	0	100	100	0	87.111	97.000	19.141
Audit Committee Independence	66.956	68	5.4994	19.221	21	12.4356	3.5531	4	1.2606	30.1752	26	14.8318	33.598	22.000	26.588

Proxies for Institutional Environment Factors (IEF)

Stock Exch. Disclosure	0.8244	0.83	0.0293	0.638	0.75	0.1485	0.401	0.42	0.0536	0.5513	0.58	0.03835	0.640	0.670	0.178
Investor Protection	79.5376	80.97	7.5452	39.2149	45.3	15.3983	42.8657	41.65	3.4289	77.9498	79.12	2.2229	59.257	52.530	21.625
Securities Regulations	96.4432	97	2.933	63.1035	63	17.1458	96.3701	100	10.2779	100	100	0	86.396	97.000	19.257
Sector A: Public Institutions & Civil Society	6.2172	6.22	0.0147	5.7759	5.74	0.2253	6.1689	6.21	0.1178	6.0298	6.07	0.1696	6.040	6.210	0.243
Sector B: high business activities	6.3444	6.35	0.0293	5.8389	5.75	0.1784	6.1513	6.23	0.1922	5.8236	5.78	0.0658	6.066	6.190	0.266
Sector C: high capital activities	6.5579	6.6	0.2218	5.9811	6.15	0.3443	5.8592	5.8	0.1849	5.8363	5.82	0.0733	6.123	6.150	0.395
Sector D: high labor/social activities	5.9123	5.92	0.0403	5.6188	5.67	0.341	6.552	6.57	0.1628	6.267	6.23	0.23395	6.005	5.920	0.415

7.5 Correlation Analysis

With respect to the correlation relationships between variables, Table 7.5A reports that even though the average COE is negatively correlated with mandatory IFRS adoption, this is not a significant relationship. On the other hand, it is consistent with our hypotheses and prior studies that the average COE is significantly and negatively correlated with most of the company-specific characteristics; namely, company size, profitability (ROA and ROE), capital intensity (-), analysts following , market values of common equity and long-term growth (Tobin Q). These initial results are important as those firm-specific CBFs will be the proxy for firm-specific incentives in the regression models used to test any COE effects in mandatory IFRS adoption.

For the correlation between the average COE and ICG and IEF variables, Table 7.5B indicates that the specific ICG factors, such as board independence, are not negatively correlated with COE, with the exception of audit committee independence. This is consistent with the literature that finds there are mixed results for a direct link between corporate performance and individual corporate governance mechanisms. However, the composite ICG score, as measured by Deminor CG Rating, is still significantly and negatively correlated with COE. On the other hand, among all specific IEF measures, it is worth-noting that only Stock Exchange Disclosure is insignificant and negatively related with COE.

However, there are some firm-specific variables, such as ROA, ROE, firm size and equity market values have more than + or – 0.70 or more pair-wise correlation. It suggests that inclusion of those in the regression models may potentially lead to multicollinearity problems. As mentioned in the previous chapter, it is important to control for this by testing all independent variables in the regression models with (1) a tolerance parameter and (2) a variance inflation factor (VIF). Accordingly, in the following Chapter 9, empirical results of multivariate analysis will present that the tolerance parameter for the independent variables measured as 0.1 or below, and VIF is less than 10.

Overall, the results of the correlation analysis for the entire sample show that certain relationships exist between the COE and the explanatory variables CBF, ICG and IEF.

Table 7.5A – Pearson Correlations between COE & various CBF variables

The correlation analysis reflects the relationship between COE and various CBF variables of mandatory IFRS adoption that reflects the degree to which the variables are related.

		COE	Size	Leverage	ROA	ROE	Cap. Intensity	D-E ratio	Analysts	Mkt Value Equity	B-M ratio	TOBINQ	Inflation	GDP-Growth	StockMkt to GDP	V&E Adopters	M-periods	CBF	PM-Adopters
COE	Pearson Correlation	1																	
	Sig. (2-tailed)																		
Size	Pearson Correlation	-.219**																	
	Sig. (2-tailed)	.000																	
Leverage	Pearson Correlation	.006	.327**																
	Sig. (2-tailed)	.613	.000																
ROA	Pearson Correlation	-.290**	.059**	-.108**															
	Sig. (2-tailed)	.000	.000	.000															
ROE	Pearson Correlation	-.249**	.181**	.297**	.729**														
	Sig. (2-tailed)	.000	.000	.000	.000														
Cap. Intensity	Pearson Correlation	-.096**	.247**	.081**	.035**	.052**													
	Sig. (2-tailed)	.000	.000	.000	.003	.000													
D-E ratio	Pearson Correlation	.005	.318**	.995**	-.103**	.313**	.079**												
	Sig. (2-tailed)	.663	.000	.000	.000	.000	.000												
Analysts	Pearson Correlation	-.206**	.616**	.182**	.120**	.171**	.081**	.178**											
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000											
Mkt Value Equity	Pearson Correlation	-.314**	.806**	.167**	.168**	.208**	.172**	.162**	.690**										

	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000										
B-M ratio	Pearson Correlation	.123**	.296**	-.063**	-.120**	-.169**	.130**	-.078**	-.106**	-.270**									
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000									
TOBINQ	Pearson Correlation	-.049**	-.223**	-.089**	-.039**	-.054**	-.070**	-.085**	.080**	.155**	-.591**								
	Sig. (2-tailed)	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000								
Inflation	Pearson Correlation	-.029*	.051**	.028*	.059**	.090**	.037**	.029*	.027*	.024*	.035**	-.013							
	Sig. (2-tailed)	.012	.000	.017	.000	.000	.002	.013	.020	.037	.003	.269							
GDP-Growth	Pearson Correlation	-.082**	-.028*	-.021	.053**	.050**	.053**	-.020	-.101**	.034**	-.105**	.082**	.261**						
	Sig. (2-tailed)	.000	.015	.075	.000	.000	.000	.086	.000	.004	.000	.000	.000						
StockMkt to GDP	Pearson Correlation	.018	-.139**	-.072**	.050**	.034**	-.028*	-.067**	-.080**	-.087**	-.072**	-.032**	-.092**	.034**					
	Sig. (2-tailed)	.127	.000	.000	.000	.004	.015	.000	.000	.000	.000	.006	.000	.004					
V&E Adopters	Pearson Correlation	.008	.124**	.022	-.027*	-.034**	.008	.021	.157**	.112**	.025*	.009	-.032**	-.040**	-.341**				
	Sig. (2-tailed)	.470	.000	.058	.021	.003	.510	.074	.000	.000	.032	.464	.006	.001	.000				
Mperiods	Pearson Correlation	-.065**	.029*	.016	.087**	.067**	-.097**	.016	.084**	.053**	-.032**	-.048**	.128**	-.256**	.100**	.064**			
	Sig. (2-tailed)	.000	.013	.168	.000	.000	.000	.163	.000	.000	.006	.000	.000	.000	.000	.000			
CBF	Pearson Correlation	-.305**	.594**	.007	.342**	.310**	.352**	.014	.642**	.749**	-.189**	.136**	.024*	.042**	-.030*	.090**	.006		
	Sig. (2-tailed)	.000	.000	.578	.000	.000	.000	.219	.000	.000	.000	.000	.040	.000	.010	.000	.620		
PMAdopters	Pearson Correlation	-.002	-.207**	-.064**	.054**	.057**	-.015	-.061**	-.240**	-.178**	-.042**	-.029*	.061**	.099**	.582**	-.600**	-.107**	-.121**	1
	Sig. (2-tailed)	.853	.000	.000	.000	.000	.201	.000	.000	.000	.000	.013	.000	.000	.000	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 7.5B - Pearson Correlations between COE & various ICG & IEF variables

The correlation analysis reflects the relationship between COE and various ICG & IEF variables of mandatory IFRS adoption that reflects the degree to which the variables are related.

		COE	Inflation	GDP Growth	Board Indep.	Board Size	Chair&CEO Separation	AuditCom Indpepend	StockExch Disclosure	Investor Protect	Securities Regulations	CG Score
COE	Pearson Correlation	1										
	Sig. (2-tailed)											
Inflation	Pearson Correlation	-.029*										
	Sig. (2-tailed)	.012										
GDP Growth	Pearson Correlation	**-.082****	.261**									
	Sig. (2-tailed)	**.000**	.000									
BoardIndepend	Pearson Correlation	**.082****	-.227**	-.017								
	Sig. (2-tailed)	**.000**	.000	.148								
BoardSize	Pearson Correlation	**.038****	-.157**	.061**	.400**							
	Sig. (2-tailed)	**.001**	.000	.000	.000							
ChairCEOSeparation	Pearson Correlation	**.070****	-.099**	-.006	.483**	.668**						
	Sig. (2-tailed)	**.000**	.000	.632	.000	.000						
AuditComIndpepend	Pearson Correlation	-.029*	-.013	.100**	.170**	.481**	.286**					
	Sig. (2-tailed)	.015	.275	.000	.000	.000	.000					
StockExchDisclosure	Pearson Correlation	**-.081****	.043**	.062**	-.212**	.142**	-.208**	.723**				
	Sig. (2-tailed)	**.000**	.000	.000	.000	.000	.000	.000				
InvestorProtect	Pearson Correlation	.015	-.143**	.073**	.549**	.689**	.497**	.820**	.473**			
	Sig. (2-tailed)	.211	.000	.000	.000	.000	.000	.000	.000			
SecuritiesRegulations	Pearson Correlation	**.068****	-.099**	-.008	.533**	.665**	.969**	.331**	-.125**	.505**		
	Sig. (2-tailed)	**.000**	.000	.498	.000	.000	.000	.000	.000	.000		
CGScore	Pearson Correlation	**-.034****	.042**	.133**	-.023*	.593**	.296**	.903**	.689**	.660**	.334**	1
	Sig. (2-tailed)	**.003**	.000	.000	.046	.000	.000	.000	.000	.000	.000	

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

Chapter 8 - COE Effects between Voluntary and Mandatory IFRS Adoption

In the previous chapter, univariate descriptive statistics were presented for the whole sample. This chapter extends the analysis by looking at the descriptive and multivariate statistics for voluntary and mandatory adopters.

8.1 Descriptive statistics for COE effects between voluntary and mandatory IFRS adoption

As indicated in Table 8.1 Panel A, early adopters (i.e. firms that adopt IFRS voluntarily earlier or in 2000) have a COE that is 1.1% lower post-adoption compared to pre-adoption (from 13.04% to 11.94%). On the other hand mandatory adopters' average COE falls by 0.69% (from 12.50% to 11.81%). Firms that are voluntary adopters (firms which adopt IFRS before the mandatory date of 2005 but after 2000) have an average 0.55% reduction (from 12.48% to 11.93%).When this study combines early and voluntary adopters in a group in Panel, the result is a 0.83% reduction in COE (from 12.76% to 11.93%), which is very close to the 0.69% average for mandatory adopters (from 12.50% to 11.81%).

In addition, Panel C contrasts the difference of the average COE in the pre- and post-mandatory period for mandatory firms with different CBFs. The results show the strong influence of CBF on the COE. In particular, it shows that mandatory firms in countries which move from weak to strong CBF between the two periods show the largest reduction in the COE, which falls by 3.52% (from 14.05% to 10.53%). On the other hand, mandatory firms with strong CBF in the pre- but weak CBF in the post-mandatory period are associated with an increase of the average COE by 2.07% (from 11.11% to 13.18%). Comparing these results to those in Chapter 7 which only shows the effects of overall IFRS adoption, these initial descriptive statistics highlight the importance of a link between mandatory adopters' strong CBF and the reduction in the average COE.

To test the joint effect of any change in the average COE between voluntary and mandatory IFRS adopters, the following Section 8.2 will examine the empirical results of the multivariate analysis.

Table 8.1: Univariate Analysis of Cost of Equity Capital across Early, Voluntary and Mandatory (strong and weak business factors) Adopters
For the period between 2000 to 2009 across 18 EU countries

Descriptive statistics illustrate the major differences between the cost of equity and mandatory, voluntary and early IFRS adopters and their respective reporting incentives.

Panel A

For the period between Pre- and Post-Mandatory Periods across Early, Voluntary and Mandatory IFRS Adopters

	EARLY ADOPTERS (N=507)	**N=**	**507**	**VOLUNTARY ADOPTERS**	**N=**	**826**	**MANDATORY ADOPTERS**	**N=**	**5961**	**Total N=**	**7294**
	Pre-Mandatory Period	Post-Mandatory Period	***Change %.***	Pre-Mandatory Period	Post-Mandatory Period	***Change %***	Pre-Mandatory Period	Post-Mandatory Period	***Change %***		
Average COE (%)	**0.1304**	**0.1194**	**-0.0110**	**0.1248**	**0.1193**	**-0.0055**	**0.1250**	**0.1181**	**-0.0069**		
N	**252**	**255**		**263**	**563**		**2797**	**3164**			

Panel B

	EARLY & VOLUNTARY ADOPTERS			**MANDATORY ADOPTERS**		
	Cost of Equity	N=	1333	Cost of Equity	N=	5961
	Pre-Mandatory	***Post-Mandatory***	***Change %***	***Pre-Mandatory***	***Post-Mandatory***	***Change %***
Average COE (%)	**0.1276**	**0.1193**	**-0.0083**	**0.1250**	**0.1181**	**-0.007**
Sample size	515	818		2797	3164	

Panel C

MANDATORY ADOPTERS

	Average Cost of Equity (%)			
	Pre-Mandatory	***Post-Mandatory***	***Change %***	Total # of Mandatory N
N	1324	1524		2848
Pre = Weak CBF	0.1405			
Post = Weak CBF		0.1318	**-0.0087**	
N	1324	1640		1640
Pre = Weak CBF	0.1405			
Post = Strong CBF		0.1053	***-0.0352***	
	1473	1640		1473
Pre = Strong CBF	0.1111			
Post = Strong CBF		0.1053	**-0.0058**	
	1473	1524		
Pre = Strong CBF	0.1111			
Post = Weak CBF		0.1318	**0.0207**	**5961**

8.2. Multivariate analysis of COE effects between voluntary and mandatory IFRS adoption

Following on from the previous section, the analysis now turns to the discussion of test results about hypothesis #1; namely whether the COE for mandatory adopters is different from that of voluntary adopters for the whole sample period 2000 to 2009.

8.2.1 Two-stage Least Squares (2SLS) results to resolve potential endogeneity issue

Before directly testing for hypothesis #1, recall that in Chapter 6 the importance of addressing the potential endogeneity issue in regression models was discussed. Also, as discussed in Chapter 6, Tables 6.3 and 6.4 illustrate, two-stage least squares (2 SLS) equations will be used in the regression models. In the first stage, the dependent variable representing the likelihood of becoming a mandatory IFRS adopter (i.e. not becoming a voluntary adopter) is regressed along with instrumental variables (Kim and Shi, 2007). Then, to control for potential endogeneity issues, the calculated variable for predicted mandatory adopters (derived from the first stage regression) is included as an additional explanatory variable in the second-stage model. This section will discuss the test results from these two-stage regressions.

Table 8.2A presents the results when the likelihood of mandatory adopters is estimated with the instrumental variables. Consistent with prior studies and the descriptive statistics in Table 7.4, the coefficient for size is significantly and negatively associated with the cost of equity. And the coefficient of returns to equity is significantly positively related with the cost of equity. Based on the result of the first stage OLS model, the dependent variable of predicted mandatory firms for each firm-year observation is estimated (for simplicity, labeled as PMAdopters). This variable will become the independent variable of mandatory IFRS adoption used in testing the effects of average COE in all the subsequent regression models.

Table 8.2 B shows the results when the variable PMAdopters is included in the second stage regression model to estimate the average COE from overall mandatory IFRS adoption. It indicates that mandatory adopters experience a statistically significant 1.2% lower COE[17]. It suggests that, overall for the full sample period, mandatory IFRS adopters are associated with a statistically significant lowering of their COE.

[17]This study also tests to see if there are differences between the original mandatory IFRS adopters (without running the 2-stage SLS model) and the predicted mandatory IFRS adopter. The results (not

In addition, Table 8.3 also exhibits that, when both mandatory and voluntary IFRS adopters are included in the regression model[18], the coefficient for voluntary IFRS adopters becomes statistically insignificant. On the other hand, the coefficient of the mandatory IFRS adopters shows a statistically significant negative sign to the COE. Thus, the initial test results support hypothesis #1 that the COE for mandatory IFRS adopters is different from voluntary IFRS adopters for the whole period 2000 to 2009. It also extends the empirical results from prior studies (Li 2010) that beyond the transition period, mandatory IFRS adopters still have a statistically different COE than voluntary IFRS firms. This result supports the theoretical framework (Chapter 3) that when IFRS adoption became mandated in the EU (as of January 1, 2005), such higher quality accounting standards required greater financial disclosure than most local accounting standards (Ashbaugh and Pincus, 2001). As a result, the increase in disclosure is associated with a reduced COE for the reasons discussed earlier in Chapter 3 (Barth et al. 2007, Lambert et al. 2007),

8.2.2 Regression Specification Error Test (RESET) for omitted variables in the two-stage SLS model

As discussed in Section 6.5.2 about the research methodology, it is important to justify and validate the independent variables in the 2 SLS model by testing if there are any specification errors. This study follows the literature (Pesaran and Taylor, 1999) and uses the Ramsey RESET for detecting if the 2 SLS model has omitted variables. To perform the Ramsey RESET, there are two stages of tests. The first test regresses the dependent variable (i.e. the predicted mandatory adopters: PMAdopters) on the independent instrumental variables. In the second test, it examines the dependent variable on all the independent ones and the square of the predicted dependent variable (i.e. PMAdopters) from the first stage regression. If the 2 SLS model functions well, the coefficient of squared PMAdopters should not have any explanatory power in the original OLS model. According to the test results (not shown here), the explanatory power (p-value) of the squared forecasted coefficient is not significant at the usual levels of confidence. The lack of significance in this test suggests that there is no

reported here) show that the original mandatory term has -06% reduction COE effect, while using the predicted variable, this doubles it to -1.2%. This demonstrates the importance of controlling for the endogeneity issue in the regressions.

[18] When both the voluntary and mandatory adoption variables are included in the regression equation, the potential singularity issue is controlled by testing both the Tolerance (more than 0.1) and VIF (less than 10) for each variable (as indicated in Table 10.3).

omitted variable issue and the functional form of the two-stage SLS model is appropriate.

So far, the test results show that when a longer period of data is available, mandatory adoption is statistically significantly related to changes in the COE, whereas this is not the case for voluntary adoption. Moreover, the reliability of the regression models used in the analysis is more robust since the 2SLS approach controls for potential issues both for endogeneity and any omitted variables. That said, the empirical tests performed in this chapter do not examine the effects of CBF, ICG and IEF in mandatory IFRS adoption on the COE, as put forward in the IPOO model. In the next chapter, test results of mandatory IFRS adoption on COE between the pre- and post-mandatory period will be discussed first. Then, this will be followed by a multivariate analysis testing the magnitude of the individual and interactive effects of CBF, ICG and IEF on the COE. More importantly, the empirical results in the following chapters will provide statistically significant support for the other hypotheses concerning the importance of reporting incentives in mandatory IFRS adoption.

Table 8.2: Full-sample Results of Two-stage Regressions of the Cost of Equity (COE) on Mandatory IFRS Adoption

Panel A: First-stage Ordinary Least Square (OLS) results to estimate the predicted mandatory IFRS adopters

PMAdopters = β0 + β1Size +β2(Log of BM) + β3(ROE) + country dummy variables + industry dummy variables + year dummy variables + error terms

Variables	Predicted Sign	Coefficient		t-value
Intercept	?	1.078	***	61.212
Size	-	-0.055	***	-11.396
ROE	+	0.045	***	3.071
Log of Book-to-Market	+	0.031	***	4.245
Year Dummies		Included		
Country Dummies		Included		
Industry Dummies		Included		
N		7294		
R Squared		36%		
ANOVA (F-test)		104.778	***	
Durbin-Watson		2.019		
Tolerance for each variable		more than 0.1		
VIF for each variable		less than 10		
Mean of residual		0		
Mean of standard predicted residual		0		
Mean of standard residual		0		

**** = 1% p-value significant and ** =5% p-value significance*

Table 8.2: : Full-sample Results of Two-stage Regressions of the Cost of Equity (COE) on Mandatory IFRS Adoption

Panel B: Second-stage Ordinary Least Square (OLS) results

Second-stage Ordinary Least Square (OLS) results to estimate the COE based on the Full-sample from the Predicted Mandatory IFRS Adopters (from 2SLS), CBF variables and others.

Cost of equity = β0 + β1 (PMAdopters) + β2(Size) +β3(Log of BM) + β4(ROE) + β5 (Capital Intensity) +β6 (Log of DE) + β7 (Analysts) + β8 (Ave. Inflation) + industry dummy variables + year dummy variables + error terms

Variables	Predicted Sign	Coefficient		t-value
Intercept	?	0.185	***	50.666
PMAdopters	-	-0.012	***	-4.681
Size	-	-0.013	***	-13.702
ROE	-	-0.042	***	-17.593
Log of Book-to-Market	+	0.015	***	11.099
Capital Intensity	-	-0.007	***	-2.218
Average inflation rate	-	-0.138	**	-1.831
Year Dummies		Included		
Industry Dummies		Included		
N		7294		
R Square		20%		
ANOVA (F-test)		65.732	***	
Durbin-Watson		1.982		
Tolerance for each variable		more than 0.1		
VIF for each variable		less than 10		
Mean of residual		0		
Mean of standard predicted residual		0		
Mean of standard residual		0		

**** = 1% p-value significant and ** =5% p-value significance*

Table 8.3: Full-sample Results of Two-stage Regressions of the Cost of Equity (Coe) on both Voluntary and Mandatory IFRS Adoption

Full-sample Results of estimating the COE effects from the Predicted Mandatory IFRS Adopters (from 2SLS), Voluntary Adopters, CBF variables & others.

Cost of equity = β0 + β1 (PMAdopters) + β2 (VAdopters) + β3(Size) +β4(Log of BM) + β5(ROE) + β6 (Capital Intensity) +β7(Log of DE) + β8 (Analysts) + β9 (Ave. Inflation) + industry dummy variables + year dummy variables + error terms

Variables	Predicted Sign	Coefficient		t-value
Intercept	?	0.183	***	40.697
PMAdopters	-	-0.011	***	-3.217
VAdopters	?	0.002		1.27
Size	-	-0.013	***	-13.797
ROE	-	-0.042	***	-17.653
Log of Book-to-Market	+	0.012	***	5.347
Log of DE ratio	+	0.027	***	14.29
Capital Intensity	-	-0.007	***	-2.305
Average inflation rate	-	-0.14	**	-1.845
Year Dummies		Included		
Industry Dummies		Included		
N		7294		
R Square		20%		
ANOVA (F-test)		65.732	***	
Durbin-Watson		1.982		
Tolerance for each variable		more than 0.1		
VIF for each variable		less than 10		
Mean of residual		0		
Mean of standard predicted residual		0		
Mean of standard residual		0		

**** = 1% p-value significant and ** =5% p-value significance*

Chapter 9: COE effects for Mandatory IFRS Adoption along the IPOO Model

After discussing the results for hypothesis #1on comparing voluntary and mandatory IFRS adoption, this chapter will examine the outcomes from the empirical tests for hypotheses #2 to 8 about the COE effects (i) for mandatory IFRS adoption between the pre- and post-mandatory period; and (ii) from proxies of reporting incentives in the IPOO model.

9.1 COE effects for Mandatory IFRS adopters between the pre and post-mandatory period:

Li (2010) and other prior studies measure a significant reduction of the cost of equity by mandatory IFRS adopters during the post-mandatory period 2005 to 2006. The present analysis extends her study by testing for a longer post-mandatory period from 2005 to 2009. Table 9.1 indicates that over this longer period mandatory adoption is still negatively associated with the COE (at -1.7% with two-sided p<1% vs. Li's study at -0.48% with two-sided p<1%).

On the other hand, mandatory adopters in the mandatory period show a very small positive coefficient (at +0.8%), but this is not significant at the usual levels (i.e. two-sided p>5%). This results for the longer post-adoption period is contrary to prior studies that find that the change in the COE for mandatory IFRS firms following the post mandatory period is not statistically significant.[19] Therefore, the result is consistent with hypothesis 2 that the cost of equity for mandatory adopters in the post-mandatory period is not associated with a significant lowering COE than that of the pre-mandatory period.

In comparing these results with those of Li (2010), they indicate mixed results for hypotheses 1 and 2. Firstly, initial evidence is gathered that it is consistent to her study showing that mandatory adopters experience a significant reduction in the COE. Secondly, while her study only includes the transition period of mandatory firms (from 2005 to 2006); this study covers the post-mandatory period from 2005 to 2009 and

[19] To test under what conditions mandatory adopters in mandatory period will be significantly associated with lower COE, This study gathers evidence (not tabulated here) that when year dummies are not included in the regression model, the coefficient for mandatory adopters in the mandatory period becomes significant at -0.006. It suggests that the reducing COE effect is probably not attributable to the mandatory IFRS adoption period itself.

shows that the mandatory period after 2005 does not associate with a reduction of the COE.

Therefore, as discussed in Chapter 3 and 4, empirical tests on COE effects of mandatory IFRS adoption should be able to provide more updated and realistic results when this study measures such effects for a longer period beyond the transition effects as indicated by prior studies.

Since this research focus is on mandatory IFRS adoption and COE effects from reporting incentives, the empirical question now calls for evidence from testing if mandatory adopters' reporting incentive is related to a significant reduction in the COE. The next section will present and discuss the results of examining the determinants and consequences of individual and interactions of firm and country-specific factors on the COE in mandatory IFRS adoption.

Table 9.1
Full-sample Results Comparing the Cost of Equity for Mandatory IFRS Adopters between Pre- and Post-mandatory Periods

After controlling for the post-adoption period, this model measures if mandatory IFRS adoption per se may associate with any change of the cost of equity when comparing to the pre-adoption period.

Cost of equity = β0 + β1 (PMAdopters) + β2(PMAdopters*Mperiod) + β3 Size) +β4(Log of BM) + β5(ROE) + β6 (Capital Intensity) +β7 (Log of DE) + β8 (Analysts) + β9 (Ave. Inflation) + industry dummy variables + year dummy variables+ error terms

Variables	Predicted Sign	Coefficient		t-value
Intercept	?	0.187	***	40.852
PMAdopters	?	-0.017	***	-4.458
PMAdoptersMperiod	-	0.008		1.665
Size	-	-0.013	***	-13.728
Log of DE ratio	+	0.028	***	15.589
ROE	-	-0.042	***	-17.566
Log of Book-to-Market	+	0.015	***	11.92
Capital Intensity	-	-0.007	***	-2.215
Average inflation rate	-	-0.153	**	-2.016
Year Dummies		Included		
Industry Dummies		Included		
N		7294		
R Square		19%		
ANOVA (F-test)		63.499	***	
Durbin-Watson		1.875		
Tolerance for each variable		more than 0.1		
VIF for each variable		less than 10		
Mean of residual		0		
Mean of standard predicted residual		0		
Mean of standard residual		0		

**** = 1% p-value significant and ** =5% p-value significance*

9.2 Mandatory IFRS adopters with strong CBF

To test if the first component of the IPOO model - strong CBF has any statistically significant reduction on the COE, this study follows the literature to proxy mandatory adopters' strong CBF as higher-than-average profitability, equity-based capital structure, long-term growth and numbers of analysts to follow. Accordingly, Table 9.2 (Model 1) shows that, on average, mandatory adopting firms have -1% COE reduction effect in a highly significant manner (with two sided p-value< 1%[20]). More importantly, it highlights that for mandatory firms with strong CBF, the coefficient gives an additional -0.4% lowering of their COE (with close to a 1% significance level)[21]. Therefore, it is evident that a significant incremental reduction in the COE is related to mandatory firms who have above-average earnings, have more equity-based financing in their capital structure, have higher long-term growth and draw more analysts to follow. This is consistent with hypothesis 3 that proposes that the higher the level of CBF, the higher the reducing COE effect from mandatory adoption. The results imply that, as also argued by prior studies (e.g. Daske et al. 2009, Bova 2008, Street and Gray 2002), when all public companies are subject to the same minimum mandatory IFRS reporting requirements, firms with strong CBF may enhance their reporting incentive (that is, a better Influence in the IPOO model) by exercising greater and better disclosures, and transparency in reporting financial results through IFRS to the capital markets (that is, higher quality of outcome). Hence, the information asymmetry between investors and managers is reduced, because investors are better-informed. Eventually, due to the reduced risk, investors are willing to lower the required discount rate. As a result, the IPOO model proposes that strong CBF prompts higher reporting incentives in IFRS adoption and subsequently the production of better quality financial reports. As a result, as the results show, stronger CBF is related to lowering of the COE.

However, while the results in Table 9.1 indicate that the mandatory period for overall mandatory adopters is not a significant factor for any COE reducing effect, this study continues to examine if there is a significant effect for mandatory IFRS adopters with strong CBF in the mandatory period. Table 9.2 (Model 2), provides consistent evidence with Table 9.1 in that the coefficient for CBF is positive but not significant. Therefore,

[20] This study follows most prior studies of IFRS that regression models are tested by the p-values measured by 1% and 5% level.

[21] If this study uses the mandatory adopters as dummy variable before 2 SLS, it finds an insignificant 0.2% reduction of the COE for Mandatory Adopters; and an insignificant 0.3% lower COE for Mandatory adopters with higher CBF in the mandatory period. This indicates the importance of applying the 2 SLS models to address endogeneity issues.

Table 9.2 results add further evidence to support hypothesis 3 that mandatory IFRS adoption and its interacting effect with strong CBF are associated with a statistically significant reduction in the COE for the full sample period, and not simply with the post-mandatory period. This initial result supports the existence of a joint effect between mandatory IFRS adoption and firm-specific strong CBF that relate to the ultimate reduction in the COE.

The following section extends the empirical tests to another component of the IPOO model – ICG, to determine if it is has a significant influence on a reduction in the COE during mandatory IFRS adoption.

Table 9.2:
Comparing the Cost of Equity for Mandatory IFRS Adopters and the Effect of Strong CBF vs. the Effect of Strong CBF in the Mandatory Period

This table gives the results for the effect of reporting incentives in mandatory IFRS adoption, the two models intend to test if there are reductions in the cost of equity when mandatory IFRS adoption interacts with:

(1) Strong CBF, an influence of firm-specifics on reporting incentives; and
(2) Strong CBF and mandatory IFRS in the adoption period. This differs from the result of Table 10.1 where strong CBF is not controlled for.

Model 1:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of Strong CBF
Cost of equity = β0 + β1 (PMAdopters) + β2(PMAdopters*StrongCBF) + β3 (Size) +β4(Log of DE) + β5(ROE) + β6 (Log of BM) + β7(Capital Intensity) + β8 (Ave. Inflation) + year dummy variables+ industry dummy variables + error terms

Model 2:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of Strong CBF in Mandatory Period
Cost of equity = β0 + β1 (PMAdopters) + β2(PMAdopters*StrongCBF*MAdoptoryPeriod**)** + β3(Size) +β4(Log of DE) + β5(ROE) + β6 (Log of BM) + β7(Capital Intensity) + β8 (Ave. Inflation) + year dummy variables+ industry dummy variables + error terms

		Model 1			**Model 2**		
Variables	Predicted Sign	Coefficient		t-value	Coefficient		t-value
Intercept	?	0.187	***	40.852	0.185	***	43.076
PMadopters	-	-0.01	***	-3.67	-0.013	***	-4.764
PMadoptersStrongCBF	-	-0.004	**	-1.975			
PMadoptersStrongCBFMperiod	?				0.002		0.928
Size	-	-0.012	***	-11.711	-0.013	***	-13.531
Log of DE ratio	+	0.027	***	14.719	0.029	***	15.633
ROE	-	-0.041	***	-17.114	-0.042	***	-0.17606
Log of Book-to-Market	+	0.014	**	10.586	0.015	***	11.9
Capital Intensity	-	-0.006	**	-1.833	-0.007	**	-2.295
Average inflation rate	?	-0.147		-1.949	-0.133		-1.756
Year Dummies		Included			Included		
Industry Dummies		Included			Included		
N		7294			7294		
R Square		20%			20%		
ANOVA (F-test)		63.499	***		63.414	***	
Durbin-Watson		1.875			1.874		
Tolerance for each variable		more than 0.1			more than 0.1		
VIF for each variable		less than 10			less than 10		
Mean of residual		0			0		
Mean of standard predicted residual		0			0		
Mean of standard residual		0			0		

**** = 1% p-value significant and ** =5% p-value significance*

9.3. Mandatory IFRS adopters with ICG

After strong CBF is proven to be a significant complementary factor in reducing the COE, this section continues to test hypotheses 4a and 4b; namely whether ICG and the respective interaction between ICG and strong CBF have any effect on the COE. As shown in Table 9.3 (Model 1), when the metric of internal corporate governance (ICG) is included, it creates a statistically significant coefficient for the lowering COE effect (at -0.1%, with two-sided p-value <1%). However, the coefficient of mandatory IFRS adoption becomes insignificant. Thus, the explanatory power of ICG dominates the overall mandatory requirement to adopt IFRS and a lower COE. This initial result implies that, on average, equity investors attach more importance to the effectiveness of internal corporate governance (that may influence reporting incentives on how firms committed to reporting their financial results through IFRS) than simply to mandatory adoption.

In addition, , Table 9.3 (Model 2) exhibits similar results as to Model 1, except that in this case the COE reducing effect is much stronger when mandatory IFRS adopters related to higher-than-average ICG (the coefficient equals -1% and is significant at the two-sided p-value <1%). This reinforces the result from Model 1 that equity markets' willingness to substantially lower their COE is significantly related to those firms which are relatively better governed.

The role of higher ICG and its effect on lowering the COE are also evident from the results of Model 3. Table 9.3 reveals that mandatory firms with higher levels of ICG have more significant effects on the lowering COE than the overall mandatory firms when its coefficient becomes more negatively correlated with the COE (at-1.2% significantly at two-sided p-value <1%)[22]. Therefore, similar to the effects from strong CBF, the empirical results provide robust support for hypothesis 4a in that higher ICG is significantly related to COE reducing effects in mandatory IFRS adoption.

Even though the literature says that there is mixed evidence on the association between corporate governance and financial reporting quality, the results from Table 9.3 shed light on the theoretical argument that high quality of financial reporting from better governed firms has a similar effect as strong CBF on the reporting incentive. In the

[22] The main reason to analyze by separating each pair of test variables is because it is easy for such related interaction terms to have high multicollinearity problem (i.e. VIF>10).

IPOO model, the reduction of the agency conflicts between shareholders and managers strengthens the reporting incentive for managers who practice IFRS adoption with greater and better disclosure over and above the minimum requirements. As a consequence, the average cost of equity for this group of firms is lowered.

So far, the results show that when individual CBF and ICG variables are included in the models (Tables 9.2 and 9.3), each of them individually leads to a significant reduced COE effect for mandatory IFRS adopters. In the following section, results from testing the respective interaction effects between CBF and ICG will be presented.

Table 9.3 Comparing the Cost of Equity for Mandatory IFRS Adopters and the Effect of Internal Corporate Governance (ICG)

The effectiveness of internal corporate governance (ICG) is hypothesized to enhance the reporting incentives of managers on mandatory IFRS adoption via a cost of equity effect. To examine this, the following three models are developed to test on any reductions in the cost of equity from both the ICG variable and the interaction between the ICG variable and mandatory IFRS adoption.

Model 1:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of ICG

Cost of equity = β0 + β1 (PMAdopters) + **β2(ICG) + β3 (PMAdopters*ICG) +** β4(Log of BM) + β5(ROE) + β6 (Log of DE) + β7 (Ave. Inflation) + industry dummy variables + year dummy variables + error terms

Model 2:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of High ICG

Cost of equity = β0 + β1 (PMAdopters) + **β2(PMAdopters*High ICG) β3 (**Size) +β4(Log of BM) + β5(ROE) + β6 (Log of DE) + β7 (Ave. Inflation) + industry dummy variables + year dummy variables + error terms

Model 3:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of ICG & High ICG

Cost of equity = β0 + β1 (P**MAdopters*ICG) + β2 (PMAdopters*High ICG) + β3 (**Size) +β4(Log of BM) + β5(ROE) + β6 (Log of DE) + β7 (Ave. Inflation) + industry dummy variables + year dummy variables + error terms

		Model 1			**Model 2**			**Model 3**	
Variables	Predicted Sign	Coefficient		t-value	Coefficient		t-value	Coefficient	t-value
Intercept	?	0.201	***	41.797	0.199	***	50.421	0.197	51.378
PMAdopters	-	0.001		0.178	-0.002		-0.752		
ICG scores	-	**-0.001**	*******	**-5.703**					
PMAdopters*ICG scores	?							0	0.838

PMAdopters*High ICG scores	-				**-0.01**	*******	**-6.677**	-0.012	*******	-5.064
Size	-	-0.016	***	-20.51	-0.016	***	-20.762	-0.016	***	-20.84
Log of DE ratio	+	0.029	***	16.126	0.029	***	16.094	0.029	***	16.196
ROE	-	-0.041	***	-17.208	-0.041	***	-17.448	-0.041	***	-17.21
Log of Book-to-Market	+	0.016	***	13.93	0.016	***	13.917	0.016	***	14.076
Average inflation rate	?	-0.275	***	-3.359	-0.126	***	-1.679	-0.246	***	-3.026
Year Dummies		Included			Included			Included		
Industry Dummies		Included			Included			Included		
N		7294			7294			7294		
R Square		20%			20%			20%		
ANOVA (F-test)		68.809	***		69.962	***		69.522	***	
Durbin-Watson		1.881			1.879			1.885		
Tolerance for each variable		more than 0.1			more than 0.1			more than 0.1		
VIF for each variable		less than 10			less than 10			less than 10		
Mean of residual		0			0			0		
Mean of standard predicted residual		0			0			0		
Mean of standard residual		0			0			0		

**** = 1% p-value significant and ** =5% p-value significance*

9.4 Mandatory IFRS Adopters with strong CBF and ICG, and Interaction Effect

To test for any effect on the COE by both the individual ICG and CBF and the interaction of these two effects following mandatory IFRS adoption, Table 9.4 (Model 1) shows that—similar to the results of Table 9.3—both above-average CBF and individual coefficients of firms' ICG index are negatively correlated with the COE (-0.4% at two-sided p-value 5% significance and -0.1% at two-sided p-value 1% significance, respectively). Moreover, without compromising the multicolinearity issue, Table 9.4 (Model 2) indicates that the coefficient of the interaction term (ICG-CBF) shows a significant negative effect on the COE of -0.6% (with a two-sided p-value <5%). This result supports hypothesis 4b that when both mandatory IFRS firms' strong CBF and high ICG factors are taken together, it results in a significantly higher reducing effect on the COE. More importantly, Model 2 highlights that in mandatory IFRS adoption, the complementary effect from inter-acting both strong CBF and high ICG leads to a lower COE than strong CBF on its own.

These initial empirical results are in line with the incentive-view that in order to achieve a reduction in the COE in mandatory IFRS adoption, both firms' internal strong CBF and board of directors' ICG mechanisms must work together to enhance reporting incentives. When managers are motivated by strong CBF and monitored by high level of ICG, the combination enhances the reporting incentive, which in turn will benefit investors by providing high quality financial reports (that is, a better output in IPOO model). As a result, the cost of equity demanded by investors may be reduced (i.e. better outcome).

Nevertheless, even though strong CBF and higher ICG together are important firm-specific factors to influence reporting incentives, the role of another component – an external and macro-level IEF in the IPOO model is still to be considered. Therefore, the empirical results related to hypothesis 5 about the effects of legal origins on the COE in mandatory IFRS adoption will be examined in the following section 9.5.

Table 9.4
Testing the Cost of Equity for Mandatory IFRS Adopters with Interaction between Internal Corporate Governance (ICG) and Strong Core Business Factors (CBF)

When both strong CBF and ICG individually show their statistically significant effects with the reduced cost of equity (Table 9.2 and 9.3), these models test any complimentary effect of further reduced cost of equity when mandatory IFRS adoption interacts with both strong CBF and high ICG.

Model 1:

Comparing the Cost of Equity for Mandatory IFRS Adopters, Effect of Strong CBF and ICG
Cost of equity = β0 + β1 (PMAdopters) + β2(PMAdoptersStrongCBF) + β3(ICG) + β4(Size) +β4(Log of BM) + β5(ROE) + β6(Log of DE) + β7 (Ave. Inflation)
+ industry dummy variables + year dummy variables + error terms

Model 2:

Comparing the Cost of Equity for Mandatory IFRS Adopters, Effect of Strong CBF and ICG
Cost of equity = β0 + β1 (PMAdopters) + β2(PMAdoptersStrongCBF) + β3(ICG) + β4(PMAdopters*StrongCBF*HighICG) +β4 (Size) +β5(Log of BM) + β6(ROE)
+ β7(Log of DE) + β8 (Ave. Inflation) + industry dummy variables + year dummy variables + error terms

		Model 1			**Model 2**		
Variables	Predicted Sign	Coefficient		t-value	Coefficient		t-value
Intercept	?	0.201	***	41.797	0.199	***	50.421
PMadopters	-	0.003		0.777	-0.002		-0.752
PMAdopters*Strong CBF	-	**-0.004**	**	**-2.637**	0		-0.23
Firms' ICG score	-	-0.001	***	-5.681	-0.001	***	-4.703
PMAdopters*HighCBF*High ICG	-				**-0.006**	**	**-2.276**

Size	-	-0.016	***	-20.51	-0.016	***	-20.762
Log of DE ratio	+	0.029	***	16.126	0.029	***	16.094
ROE	-	-0.041	***	-17.208	-0.041	***	-17.448
Log of Book-to-Market	+	0.016	***	13.93	0.016	***	13.917
Average inflation rate	?	-0.275	***	-3.359	-0.126	***	-1.679
Year Dummies		Included			Included		
Industry Dummies		Included			Included		
N		7294			7294		
R Square		20%			20%		
ANOVA (F-test)		68.809	***		69.962	***	
Durbin-Watson		1.881			1.879		
Tolerance for each variable		more than 0.1			more than 0.1		
VIF for each variable		less than 10			less than 10		
Mean of residual		0			0		
Mean of standard predicted residual		0			0		
Mean of standard residual		0			0		

**** = 1% p-value significant and ** =5% p-value significance*

9.5 Interaction between Mandatory IFRS Adoption and Four Legal Origins

While strong CBF, ICG and the respective interactive effects on lowering COE have been discussed above, this study now examines the results of testing if mandatory IFRS firms in four different legal origins are significantly associated with variation in the COE (as per hypothesis 5).

Table 9.5 Panel A (Model 1) finds that for mandatory IFRS firms domiciled in German origin (GO), there is a -0.5% effect on the COE, but this is insignificant at the usual levels of significance (i.e. at two-sided p-value >5%)[23]. For German mandatory adopters, it suggests that a substantial reduction in their COE does not follow from the switch in accounting standards. It is different for mandatory adopters in British origin (BO), where the coefficient is statistically significantly related to the -1.3% COE effect (at the two-sided p-value <1%significance level in Model 2). These initial results are consistent with the literature in that when the local accounting standards in Common Law system such as British-origin countries are similar to IFRS; the information needs of investors will be promoted in a market-orientated economy through their social, cultural and business practices. Such interaction with the Common Law type legal origin may associate with lower COE. On the other hand, under Code Law regime, Germany's previous accounting standard (the Handelsgesetzbuch -HBG) substantially differs from IFRS and was mainly used for satisfying stakeholder groups (Ball, et al., 2000). Since adopting IFRS application, Germany has been developing its equity markets infrastructure [24] so that Germany is gradually transitioning to a market-based economy from an insider economy orientation (Ball, et al. 2000). As a result, it is possible that German-origin's Code Law structure needs more time to adapt the capital market benefits from mandatory IFRS adoption and therefore is not yet related to the statistically significant lowering COE effect.

On the other hand, when Scandinavian origin (SO) is regarded as heavy socialist economy involved (i.e. Sweden, Demark and Finland), the effect of mandatory IFRS may be different relative to the other legal origins. Accordingly, Table 9.5 Panel A

[23] Also, when the variable of German-origin mandatory IFRS adopters with strong CBF is included, it (not tabulated) has -0.9% COE effect but again this is insignificant.

[24] A recent study by Lee et al. (2010) measures the index of Equity Market Importance in the EU by the mean rank across the three variables used in La Porta et al. (1997): aggregated stock market capitalization held by minorities relative to GNP; number of listed domestic firms relative to the population; and the number of IPOs relative to the population. German equity market has the least score among the 17 European countries used in the present study.

(Model 3) documents that mandatory IFRS firms in SO, on average, are not negatively associated with their COE. Finally, Table 9.5 Panel A (Model 4) indicates that the dummy variable of French origin (FO) mandatory adopters is significantly negatively related with the COE with a coefficient of -0.4% that is statistically significant at the 5% level.

Therefore, due to the diverse legal origins of the institutional environment in the 18 EU countries, such legal, cultural, social and economic differences may shape different levels of reporting incentive for firms in mandatory IFRS adoption. This, in turn, may result in a different capital market consequence in the IPOO model based on firms' legal origin. Hence, the empirical results from Table 9.5 are consistent with hypothesis 5 that legal origins of British (BO) and French (FO) firms are significantly and negatively related with the COE, while Scandinavian (SO) and German (GO) firms are not.

While the German (GO) is the only legal origin proved not to have a significant coefficient, this study further tests to see if the mandatory period in different legal origins, especially GO, may have different results of COE effects. Recall that previously in Table 9.1, overall mandatory period alone is not an important coefficient. Interestingly, evidence is found that in 4 legal origins only the German origin (GO) has a significant coefficient (as shown in Table 9.5 Panel B). This result shows that, on average, GO mandatory IFRS firms in the post mandatory period are associated with a coefficient of a -1.7% COE effect (significant at the 5% level). When prior studies focused on German voluntary adopters who were benefitted from the lower COE, the results in Panel B suggest that a significant reduction in the COE is also evident for German mandatory IFRS adopters in the post-2005 period.

Table 9.5 Panel A Comparing the Cost of Equity for Mandatory IFRS Adopters and their Legal Origins

To examine the effect of Institutional Environment Factors (IEF) in mandatory IFRS adoption on the cost of equity, the four models proxy IEF using four legal origins: German-origin (GO), British-origin (BO), Scandinavian-origin (SO) and French-origin (FO), and test if there are reductions in the cost of equity related to the interaction between legal origins and mandatory IFRS adoption.

Model 1:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of **German-origin (GO)**

Cost of equity = β0 + β1 (PMAdopters) + **β2(PMAdopters*GO)** + β3 Size) +β4 (Log of Book-to-Market) + β5 (Ave. Inflation) + industry dummy variables + year dummy variables + error terms

Model 2:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of **British-origin (BO)**

Cost of equity = β0 + β1 (PMAdopters) + **β2(PMAdopters*BO)** + β3 Size) +β4 (Log of Book-to-Market) + β5 (Ave. Inflation) + industry dummy variables + year dummy variables + error terms

Model 3:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of **Scandinavian-origin (SO)**

Cost of equity = β0 + β1 (PMAdopters) + **β2(PMAdopters*SO)** + β3 Size) +β4 (Log of Book-to-Market) + β5 (Ave. Inflation) + industry dummy variables + year dummy variables + error terms

Model 4:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of **French-origin (FO)**

Cost of equity = β0 + β1 (PMAdopters) + **β2(PMAdopters*FO)** + β3 Size) +β4 (Log of Book-to-Market) + β5 (Ave. Inflation) + industry dummy variables + year dummy variables + error terms

		Model 1: GO			**Model 2:BO**			**Model 3:SO**			**Model 4: FO**		
Variables	Predicted Sign	Coefficient		t-value	Coefficient		t-value	Coefficient		t-value	Coefficient		t-value
Intercept	?	1.191	***	28.193	0.187	***	45.758	0.181	***	43.773	0.186	***	44.845
PMAdopters	-	-0.015	***	-2.798	0	***	-0.125	-0.021	***	-8.099	-0.011	***	-4.078
PMAdopters*Legal	+	-0.005		-0.656	-0.013	***	-8.427	0.027	***	14.22	-0.004	**	-2.385

Origin													
Size	-	-0.014	***	-17.562	-0.016	***	-20.891	-0.017	***	-22.876	-0.014	***	-19.048
Log of Book-to-Market	+	0.015	***	13.584	0.015	***	13.776	0.017	***	15.451	0.015	**	13.878
Average inflation rate	?	-0.183	**	-2.43	-0.193	***	-2.59	0.001		0.011	-0.145		-1.904
Year Dummies		Included			Included			Included			Included		
Industry Dummies		Included			Included			Included			Included		
N		7294			7294			7294			7294		
R Square		21%			22%			23%			21%		
ANOVA (F-test)		73.539	***		76.967	***		83.34			73.794	** *	
Durbin-Watson		1.859			1.873			1.904			1.861		
Tolerance for each variable		more than 0.1			more than 0.1			more than 0.1			more than 0.1		
VIF for each variable		less than 10			less than 10			less than 10			less than 10		
Mean of residual		0			0			0			0		
Mean of standard predicted residual		0			0			0			0		
Mean of standard residual		0			0			0			0		

**** = 1% p-value significant and ** =5% p-value significance*

Table 9.5 Panel B
Comparing the Cost of Equity for Mandatory IFRS Firms in GO and Mandatory IFRS firms in GO in Mandatory Period.

Previously, Table 9.3 shows that, overall, the post-mandatory period of IFRS adoption does not associate with a reduced COE. Panel A of this Table documents that German-origin (GO) does not relate to any lowering COE effect. This model tests if GO interacts with post-mandatory IFRS adoption and relates to any statistically significant reduction in the COE.

Model:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of Strong CBF
Cost of equity = β0 + β1 (PMAdopters) + β2(PMAdopters*GO) + β3 (PMAdopters*GO*MandatoryPeriod) + β4(Size) +β5(Leverage) + β6(ROA) + β7 (Log of B-M Ratio) + β8 (Ave. Inflation) + β9 (Industry dummy variables) +β10 (Year dummy variables) + error terms

Variables	Predicted Sign	Coefficient		t-value
Intercept	?	0.193	***	28.253
PMAdopters	-	-0.017	***	-3.059
PMAdopters*GO	+	0.001		0.161
PMAdopters*GO*MandatoryPeriod	-	-0.017	**	-2.42
Size	-	-0.015	***	-17.674
Leverage	+	0.03	***	8.534
ROA	-	-0.147	***	-20.634
Log of Book-to-Market ratio	+	0.015	***	13.639
Average inflation rate	?	-0.194	***	-2.568
Year Dummies		Included		
Industry Dummies		Included		
N		7294		
R Square		21%		
ANOVA (F-test)		70.07	***	
Durbin-Watson		1.86		
Tolerance for each variable		more than 0.1		
VIF for each variable		less than 10		
Mean of residual		0		
Mean of standard predicted residual		0		
Mean of standard residual		0		

**** = 1% p-value significant and ** =5% p-value significance*

9.6 Interaction between mandatory IFRS Adoption with strong CBF and 4 legal origins

The previous sections provide evidence that in mandatory IFRS adoption, (i) strong CBF interacts with ICG to be associated with significantly lower COE; and (ii) different legal origins have variations in the effect on the COE. This section now turns to examining the empirical results of the COE when strong CBF interacts with different legal origins.

German Origin (GO)

Table 9.6 (Model 1) records evidence that mandatory IFRS adopting firms in German-origin (GO) countries experience insignificant COE effect (this is the same result as in the previous Table 9.2). This accords with the descriptive statistics of Table 7-4 and the literature (e.g. Ball et al. 2005) that coded law countries such as Germany are regarded as relatively lower institutional environments for capital market investors (e.g. low Stock Exchange Disclosure and investor protection). However, when the interaction between mandatory firms in German (GO) and strong CBF is included, it has a significantly negative coefficient on the COE (-1.3% at 5% level of significance). This result highlights the importance of strong CBF for German (GO) mandatory firms, as it may strengthen their reporting incentive and subsequently associates with a significant negative COE. Therefore, when prior studies claim that some German (GO) firms adopt IFRS voluntarily with high reporting incentive and hence a lower COE, this result is also true for German (GO) mandatory firms with strong CBF.

British Origin (BO)

Table 9.6 (Model 2) indicates a similar result to that of Table 9.5 Panel A in that overall mandatory adoption by British (BO) firms has a degree of effect in lowering the COE as there is a -1% significant coefficient (with two-sided $p<1\%$). However, when mandatory IFRS firms in British (BO) interact with strong CBF, this is linked to a further negative COE effect (-0.5%) but this is not significant. The results suggest that, on average, BO firms with overall mandatory IFRS adoption experience lower COE, but not because of a strong CBF.

Scandinavian Origin (SO)

Contrary to other legal origins, Table 9.6 (Model 3) shows that statistically Scandinavian (SO) mandatory IFRS adopters are not negatively associated with the

COE. It is possible that Scandinavian-origin (SO) countries are regarded as heavy social-market based economies and, as a consequence equity investors may respond to mandatory IFRS adoption differently relative to the other legal origins. The results do not show the any significant effect on the COE even when strong CBF is included (result not shown). However, when specific CBF variables are controlled, the parameter of Scandinavian (SO) firms with higher profitability has a significant -1.4% effect on the COE (with two-sided p<1%). This implies that strong composite CBF in Scandinavian (SO) IFRS adoption does not relate to a significant reduction in the COE, unless the firms are very profitable. One way of interpreting this result is that, maybe Scandinavian (SO) firms need more time to transition from the Nordic model social-based to a more capital market-based approach in order to benefit from a reduction in their COE following mandatory IFRS adoption.

French Origin (FO)

Similar to the GO setting, evidence from Table 9.6 (Model 4) documents that the coefficient for the interaction between strong CBF and French (FO) mandatory adopters is significant with a -0.8% reduction in the COE. However, French (FO) mandatory adoption has zero effect on the COE. It indicates that French (FO) firms adopting IFRS are not related to any significant incremental lowering of their COE, unless they have strong CBF to enhance firm-specific reporting incentives. Overall, the test results from Table 9.6 confirms hypothesis 6 that the COE effect for mandatory IFRS firms differs between strong CBF and their IEF (proxied by legal origins). The findings here are similar to prior studies which document diverse empirical results for firm-specific CBF in interaction with legal origins (Krivogorsky et al. 2010). Due to the underlying differences in cultural, legal and economic backgrounds, country-specific IEF appears to interact with firms' strong CBF differently. As a result, the evidence shows that only German and French equity investors respond to mandatory IFRS adopters' strong CBF with significant negative COE effects.

Besides legal origins, recent research studies proxy institutional factors with measures of national levels of bureaucratic formalities in business practices. In the following section, classifying European countries by such differentiating factors as the IEF, I document empirical results from testing hypothesis 7.

Table 9.6 Comparing the Cost of Equity for Mandatory IFRS Adopters and the Interaction Effect between Strong CBF and the Four Legal Origins

When firms' strong CBF is proved to be a statistically significant coefficient in relation to lower COE (Table 9.2), this test examines if such strong CBF interacts with the four different legal origins in mandatory IFRS adoption and any reductions in the COE.

Model 1: Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of German-Origin (GO)

Cost of equity = β0 + β1 (PMAdopters) + **β2(PMAdopters*StrongCBF)** + β3 (PMAdopters*GO) +β4(PMAdopters*GO*LegalOrigin*StrongCBF) + β5 (size) + β6 (Leverage) + β7 (ROA) + β8 (Log of BM) + β9(Average Inflation) + Year Dummies + Industry Dummies + Errors

Model 2: Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of British-Origin (BO)

Cost of equity = β0 + β1 (PMAdopters) + **β2(PMAdopters*StrongCBF)** + β3 (PMAdopters*BO) +β4(PMAdopters*BO*LegalOrigin*StrongCBF) + β5 (size) + β6 (Leverage) + β7 (ROA) + β8 (Log of BM) + β9(Average Inflation) + Year Dummies + Industry Dummies + Errors

Model 3: Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of Scandinavian-Origin (SO)

Cost of equity = β0 + β1 (PMAdopters) + **β2(PMAdopters*StrongCBF)** + β3 (PMAdopters*SO) +β4(PMAdopters*SO*High Profitability) + β5(PMAdopters*SO*Capital Intensity) + β6(PMAdopters*SO*Equity-based Structure) +β7 size) + β8(Leverage) + β9(ROA) + β10(Log of BM) + β11(Average Inflation) + Year Dummies + Industry Dummies + Errors

Model 4: Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Effect of French-Origin (FO)

Cost of equity = β0 + β1 (PMAdopters) + **β2(PMAdopters*StrongCBF)** + β3 (PMAdopters*BO) +β4(PMAdopters*BO*LegalOrigin*StrongCBF + β5 (size) + β6 (Leverage) + β7 (ROA) + β8 (Log of BM) + β9(Average Inflation) + Year Dummies + Industry Dummies + Errors

		Model 1: GO			**Model 2:BO**			**Model 3:SO**			**Model 4: FO**		
Variables	Predicted Sign	Coefficient		t-value	Coefficient		t-value	Coefficient		t-value	Coefficient		t-value
Intercept	?	0.189	***	27.083	0.199	***	50.421	0.178	***	41.043	0.185	***	42.493
PMAdopters	-	-0.015	***	-2.617	-0.001		-0.185	-0.02	***	-7.251	-0.011	**	-3.87
PMAdopters*HighCBF	?	-0.002		-1.071	0		-0.063	-0.003		-1.527	0.001		0.333
PMAdopters*Legal Origin	+	0.001		0.173	-0.01	***	-5.17	0.036	***	10.142	0		2.1

PMAdopters*HighCBF*Legal Origin	-	-0.013	**	-2.056	-0.005		-1.681				-0.008	***	-2.708
PMAdopters*HighProfit*SO	?							-0.014	***	-4.162			
PMAdopters* CapitalIntensity*SO	?							-0.003		-0.755			
PMAdopters *Equity-based*SO	?							-0.002		-0.728			
Size	-	-0.014	***	-13.543	-0.016	***	-20.762	-0.016	***	-18.058	-0.014	***	-15.002
Leverage	+	0.029	***	8.072	0.029	***	16.094	0.039	***	10.374	0.031	***	8.4
ROA	-	-0.145	***	-19.897	-0.041	***	-17.448	-0.137	***	-18.645	-0.148	***	-20.385
Log of Book-to-Market	+	0.014	***	11.56	0.016	***	13.917	0.016	***	13.273	0.015	***	12.301
Average inflation rate	?	-0.187	**	-2.482	-0.126	***	-1.679	-0.007		-0.098	-0.137		-1.794
Year Dummies		Included			Included			Included			Included		
Industry Dummies		Included			Included			Included			Included		
N		7294			7294			7294			7294		
R Square		21%			22%			23.20%			20%		
ANOVA (F-test)		68.514	***		71.655	***		73.076			69.522	***	
Durbin-Watson		1.862			1.874			1.905			1.885		

Tolerance for each variable	more than 0.1	more than 0.1	more than 0.1	more than 0.1
VIF for each variable	less than 10	less than 10	less than 10	less than 10
Mean of residual	0	0	0	0
Mean of standard predicted residual	0	0	0	0
Mean of standard residual	0	0	0	0

**** = 1% p-value significant and ** =5% p-value significance*

9.7 Mandatory IFRS adoption and institutions' bureaucratic and administrative formalities

In the previous chapters, empirical tests are conducted based on a proxy for IEF that uses the sample countries' legal origins. Another similar but more comprehensive way to examine the institutional effects on the COE in mandatory IFRS adoption is by using different national levels of bureaucratic and administrative formalities. In particular, this can be done by partitioning the EU countries based on the approach adopted by the Institutional Profiles database (www.cepii.fr/ProfilsInstitutionels Database.htm) This classifies EU countries into four Sectors A, B, C & D, as discussed in Chapter Four .

Each Sector measures the magnitude of how various institutional factors interact with mandatory IFRS adoption using a country-specific composite index. Sector A estimates for each country's such factors as public rights and liberties, transparency, corruption control, efficiency of administration, independence of the justice system, and etc. It includes countries such as Austria, Belgium and Demark which have the highest average score for the EU countries with highly developed public institutions and civil society. Sector B countries, such as Spain and the Netherlands, have a high scores for goods and services, thorough the regulation of competition and trade openness, privatization, nationalizations, freedom of prices, intellectual property protection and so on. Meanwhile, countries in Sector C, such as France and Italy, belong to the development of capital markets in areas like interest rates freedom, financial openness, micro-lending and regulations. Finally, countries of Sector D, such as Sweden and France, are measured by higher estimates on labor market and social relations, which are about trade union freedom and pluralism, respect for labor laws, circulation of workers, and so on. As per the discussion in Chapter 3, it is expected that since all sectors except Sector D share certain characteristics that link with mandatory IFRS adoption, there are expected negative coefficients for sectors A, B and C, but not D. Based upon such IEF partition system, this section examines if there are variations of COE effects from mandatory IFRS adoption in institutional factors with different focuses of bureaucratic formalities.

While Krivogorsky et al. (2010) argue that different sectors have substantial variations in national level of bureaucratic formalities in business practices that modify a company's likelihood to early (voluntary) IFRS adoption, findings from Table 9.7 shows evidence that sectors also have various impacts on mandatory IFRS adoption. Even though in Table 9.7 (Model 1) the coefficient of Sector A by itself is not significant, the interplay between Sector A and mandatory IFRS adopters is a statistically significant -0.2% (with two-sided p<1%) reduction in the COE. It suggests that a high level of public institutions and civil society interacted with IFRS adoption may be an important explanatory variable to enhance firms' reporting incentive and subsequently lower the COE in mandatory adoption of IFRS.

Table 9.7 (Model 2) shows the results for Sector B countries, where the model has a Sector B's negative coefficient (-1.4% at 1% significance level) in reducing the COE. Furthermore, there is a significant -0.2% coefficient (with two-sided p<1%) for the interactive effect between Sector B countries' IEF and mandatory IFRS adoption. The findings from Table 9.7 are in line with hypothesis 7 that IEF proxied by high level of bureaucratic formalities in Sectors A, B and C have the infrastructures to support mandatory IFRS adoption and be associated with a lowering of firms' COE. It is possible that mandatory firms in sector D countries do not have any association with the lowering COE effect (where the coefficient equals 0), since sector D characteristics emphasize more in labor market and social relations but not in capital market development. Therefore, in addition to legal origins, the above results provide substantial evidence for the ultimate inter-relatedness between institutions' bureaucratic and administrative formalities; and mandatory IFRS adoption. These results support the institutional-based view argued in Ch. 4 that along the IPOO model, in addition to the firm-specific CBF and ICG, the uncontrollable macro-level but unique influences from legal, cultural, economic and social also play an important role in mandatory IFRS adoption that leads to firms' COE effects.

Overall, the empirical tests provide inferential results for operating hypotheses #1 to 7 and show that it is the substantial variations in CBF, ICG and IEF of mandatory IFRS adopters in the EU that leads to a change in firms' COE. In the next chapter, further tests and results for hypothesis #8 about the interactive effects between theses proxies of reporting incentives will be considered.

Table 9.7 Comparing the Cost of Equity for Mandatory IFRS Adopters and the Four Sectors of Bureaucratic Formalities (A, B, C & D)

In addition to using legal origins as the proxy of IEF, four sectors of bureaucratic formalities in the EU are proxied to test if such IEF setting interacts with mandatory IFRS adoption and associate with the reduction in the cost of equity.

Model 1:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Sector A of bureaucratic formalities

Cost of equity = β0 + β1 (Sector A score) + β2(PMAdopters*Sector A) + β3 Size) +β4(Log of DE) + β5(ROA) + β6 (Log of DE) + Year Dummies + Industry Dummies + Errors

Model 2:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Sector B of bureaucratic formalities

Cost of equity = β0 + β1 (Sector B score) + β2(PMAdopters*Sector B) + β3 Size) +β4(Log of DE) + β5(ROA) + β6 (Log of DE) + Year Dummies + Industry Dummies + Errors

Model 3:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Sector C of bureaucratic formalities

Cost of equity = β0 + β1 (Sector C score) + β2(PMAdopters*Sector C) + β3 Size) +β4(Log of DE) + β5(ROA) + β6 (Log of DE) + Year Dummies + Industry Dummies + Errors

Model 4:

Full-sample Results of Comparing the Cost of Equity for Mandatory IFRS Adopters and Sector D of bureaucratic formalities

Cost of equity = β0 + β1 (Sector D score) + β2(PMAdopters*Sector D) + β3 Size) +β4(Log of DE) + β5(ROA) + β6 (Log of DE) + Year Dummies + Industry Dummies + Errors

		Model 1: SECTOR A			**Model 2:SECTOR B**			**Model 3: SECTOR C**			**Model 4: SECTOR D**		
Variables	Predicted Sign	Coefficient		t-value	Coefficient		t-value	Coefficient		t-value	Coefficient		t-value
Intercept	?	0.194	***	12.752	0.278	***	19.258	0.244	***	21.77	0.106	***	8.986
Sector A/B/C/D Weighted Ave.Score	-	-0.001		-0.529	-0.014	***	-6.345	-0.01	***	-5.247	0.011	**	6.931
PMAdopters*Sector	-	-0.002	***	-5.401	-0.002	***	-5.624	-0.001	**	-2.021	0		0.108

A/B/C/D													
Size	-	-0.013	***	-18.251	-0.015	***	-19.666	-0.014	***	-19.252	-0.012	***	-16.887
Log of Debt-Equity	+	0.01	***	5.56	0.01	***	5.97	0.01	***	5.892	0.01	***	6.058
ROA	-	-0.151	***	-21.24	-0.151	***	-21.296	-0.15	***	-21.247	-0.152	***	-21.505
Log of TobinQ	-	-0.023	***	-11.765	-0.024	***	-12.055	-0.024	***	-12.233	-0.023	***	-11.683
Year Dummies		Included			Included			Included			Included		
Industry Dummies		Included			Included			Included			Included		
N		7294			7294			7294			7294		
R Square		20%			21%			20.70%			21%		
ANOVA (F-test)		73.587	***		76.21	***		75.588	***		75.208	***	
Durbin-Watson		1.852			1.862			1.859			1.859		
Tolerance for each variable		more than 0.1			more than 0.1			more than 0.1			more than 0.1		
VIF for each variable		less than 10			less than 10			less than 10			less than 10		
Mean of residual		0			0			0			0		
Mean of standard predicted residual		0			0			0			0		
Mean of standard residual		0			0			0			0		

**** = 1% p-value significant and ** =5% p-value significance*

Chapter 10 - Mandatory IFRS Adoption, CBF & ICG in Four Legal Origins; & Additional Analysis

The previous chapters have discussed the empirical results concerning hypotheses #1 to 7 about change in the COE from models capturing individual and some combined effects of CBF, ICG and then IEF. To systematically measure COE as the outcome from the IPOO model, this study tests and documents evidence for individual and interactions of both CBF and ICG in each IEF setting (proxied by legal origins).

10.1 Effects from 4 Legal Origins: CBF and ICG in German Origin (GO)

Table 10.1 (Model 1) shows that German origin (GO) mandatory firms and strong CBF when interacting together are associated with a significant incremental reduction in COE of -2.3% (with two-sided p<5%). This coefficient is much larger than that for the coefficient between the overall mandatory adoption and strong CBF. Also, this result is much stronger than that of Table 9.6 (Model 1) when ICG is absent (a significant -1.3%). Hence, it stresses the relative importance of both firm-specific CBF and ICG in the German origin (GO) model in strengthening the reporting incentives in mandatory IFRS adoption.

Regarding the effect on the COE from ICG, Table 10.1 (Model 1) shows that this is significantly negatively correlated with the COE by -0.1% (at the 1% level). This is consistent with the result from Table 9.3 that in general ICG is inversely related to the COE. However, when ICG interacts with German origin (GO), it shows that the effect of GO-Mandatory firms' ICG is positively related to the COE (0.1% at 1% level of significance); and it offsets the overall lowering COE benefits (-0.1% at 1% level of significance). It is possible that for the German code-law setting, ICG may not be helpful in reducing the COE in mandatory IFRS adoption. This result is consistent with the literature that historically most continental European firms (like in Germany) rely on debt, rather than equity markets, as their main source of financing. For instance, German bankers may sit on the supervisory board of directors of a client company and exercise control and closely monitor roles (Krivogorsky et al. 2010). Therefore, Table 10.1 (Model 1) reveals that for German (GO) mandatory firms, significant benefits of lowering the COE mainly are related to a high level of firm-specific CBF, not ICG.

CBF and ICG in British-origin (BO)

Similar to Table 9.6 (Model 2) in the previous section, Table 10.1 (Model 2) shows that British (BO) strong CBF is negatively associated with the COE but insignificantly. It reinforces the results that British (BO) mandatory adopters in the IPOO model do not rely on strong CBF to boost reporting incentives for lowering their COE.

Table 10.1 (Model 2) also highlights the significant negative coefficient when ICG interacts with British (BO) mandatory firms, which is similar to the results from Table 9.3 (at -1% with two-sided p<1%) but with a much larger and significant COE reduction effect (at -1.7% at 1% level). It suggests that British (BO) mandatory firms who benefit from a lower COE effect appear to have better corporate governance mechanisms. This result implies that for firms (before adoption of IFRS) where the local accounting standard is similar to IFRS, such as British (BO), equity investors' cost of equity is negatively and statistically significantly linked with the effectiveness of how mandatory IFRS firms are governed by their respective boards of directors. Therefore, with UK mandatory IFRS adoption, it is possible that a high level of ICG is more influential compared to firms' CBF in shaping reporting incentives and hence in giving investors' better financial disclosures. As a result, there is a substantial and significant reduction in such firms' COE. Compared to Model 1 for German origin (GO) firms, it is evident that British (BO) mandatory firms with a high level of ICG (not strong CBF) are significantly related to a substantial reduction in their COE.

CBF and ICG in Scandinavian Origin (SO)

Table 10.1 (Model 3) includes both strong CBF and ICG in the model and illustrates a consistent result with that of Table 9.6 in that strong CBF in SO mandatory adoption does not help in reducing the COE, unless such firms are relatively more profitable (the coefficient for this effect is -2.1% and significant at 1% level). Similarly, Scandinavian (SO) large-size firms with more analysts to follow seem to suggest a more negative effect on the COE, but this is not significant. From this initial result, it appears the result of mandatory IFRS adoption for Scandinavian (SO) firms is dissimilar to other European counterparts. However, this result is consistent with the related prior study by Aussenegg et al. (2009) that when change in earnings management level is the proxy for accounting quality following IFRS adoption, Northern European countries (i.e. Scandinavian origin) do not show any significant change due to such firms already evidencing lower earnings management prior to IFRS adoption compared to the rest of

Europe.. Meanwhile, Burgstahler et al. (2006) also point out that the need for raising capital in public markets in Europe results in greater demand for high quality earnings from IFRS adoption. It implies that it is possible that Scandinavian (SO) firms domiciled in heavy social-based market economy do not have such urgency to join the integrated capital markets, therefore, have fewer incentives to adopt IFRS, even though it is mandatory (Krivogorsky et al. 2010).

The results indicate that overall ICG and its interaction with CBF in mandatory IFRS adoption is related to a reduced COE (Table 9-4 Model 2). However, for the results of ICG in Table 10.1, SO mandatory firms in Model 4 behave in the same way as GO mandatory firms in Model 1 in that the -0.1% lowering COE effect from ICG has been offset by the +0.1% of Scandinavian (SO) mandatory firms' ICG. It is possible that, consistent with the literature, ICG may not function effectively to associate with lower COE in countries with a high level of ownership concentration as is the case for Scandinavian (SO) firms. This should be compared to the dispersed ownership of shareholdings in British origin (BO) countries where shareholders rely on corporate governance by the board of directors' to regulate and monitor managers' performance. Given this difference for SO firms the result for these firms is expected to be contrary to mandatory IFRS adopting firms in Model 2 when ICG interacts with British origin to associate with -1.7% reduced COE effect (with two-sided $p<1\%$ level of significance). It suggests that even though IFRS is mandated in the EU, Scandinavian (SO) mandatory adopters' ICG, on average, is not able to associate with a lower COE.

Thus, the empirical results show that strong CBF and ICG are not indicative of any lower COE for Scandinavian (SO) mandatory firms. The results here are consistent with the study by Hjelstrom and Schuster (2008) who find evidence suggesting that Swedish managers comply with the IFRS rules largely due to the potential costs of non-compliance related to auditors, instead of looking for the benefits from more and better disclosures in the capital markets. Accordingly, based on the IPOO model, Scandinavian (SO) based mandatory IFRS adoption may not yet provide consistently strong incentives for firms that lead to observable benefits in a lowered COE.

CBF and ICG in French-origin (FO)

When both variables CBF and ICG are included, as in Model 4, Table 10.1 reports that French (FO) mandatory IFRS adopters with strong CBF have a significant -0.5% (with two-sided p<1%) reduction in their COE. This result supports the outcomes from Table 9.6 Model 4 where the variable of strong CBF of mandatory firms exhibits a significant coefficient in French origin adopters when ICG is not involved. It also indicates the relative importance of strong CBF for French (FO) firms in adopting IFRS mandatorily in reducing the COE. In fact, when mandatory adoption interacts with strong CBF in the French (FO) setting, it shows a slightly larger significant and negative coefficient for the COE (-0.9% for Table 10.1 vs. -0.8% for Table 9.6).

Regarding the effect of ICG in Model 4, Table 10.1 demonstrates that the FO mandatory firms' ICG index does not contribute to the COE effect (as the coefficient equals 0) and hence adds nothing to firms' ICG overall -0.1% coefficient (significant at the 1% level). The lack of an interaction effect with ICG can be interpreted that, for French (FO) mandatory IFRS adoption, firm-specific strong CBF (like GO's strong CBF) is an important component to associate with the lower COE for overall mandatory firms' strong CBF. But that this does not interact with ICG to any degree.

Taken together, Table 10.1 Models 1 to 4 presents empirical test results based on the complete IPOO model to investigate how (1) individual strong CBF and ICG interact with (2) legal origins relate to any reduction in the COE. Consistent with hypothesis #8, empirical results from Model 1 to 4 suggest that there are variations in the COE effects for mandatory adopters among legal origins so that their respective CBF and/or ICG interact. Particularly, in legal origins where established capital market and legal structures may support IFRS adoption, like British origin (BO), where a high level of reporting incentive is mainly powered by ICG and IEF. It is consistent with the literature that in Anglo-Saxon countries, corporate governance has been used to align management incentives with shareholders' interests because firms typically have a wide separation between management and ownership (Fama and Jensen, 1983). This applies to mandatory IFRS adoption, which leads to more disclosures in financial reporting, so that shareholders are in a better position to collect information and monitor management behavior. As a result, the COE may be lowered when potential agency conflicts are possibly better mitigated due to the reduction in information asymmetry. On the other hand, both Germany origin (GO) and French origin (FO) mandatory IFRS firms display

a similar significant negative COE effect from strong CBF and its interactions with legal origins. It suggests that in such countries where IEF does not fully support IFRS adoption, firm-specific factors may prevail in achieving a lower COE. However, Scandinavian (SO) firms appear to lack the fundamental firm and country-specific factors to stimulate reporting incentives for mandatory IFRS adoption as these show no link to any additional significant reduction in their COE. In fact, this study provides empirical evidence that the desired outcome of a lower COE is linked the dynamics of different firm-specific micro and country-specific macro factors. These factors interact together in promoting reporting incentive for mandatory IFRS adoption.

Overall, the findings of this study about significant variations in COE effect from mandatory IFRS adoption in Europe complement and extend the prior work by Ball et al. (2003). This study analyzes accounting quality for four East Asian countries that have accounting standards similar to common law countries but differ in institutional structures. Despite the high quality of accounting standards, the earnings properties of the East Asian countries do not resemble those in common law countries like the U.K. and U.S., because different institutional factors shape managers' reporting incentives.

In addition to the above, this study also provides more insights about the joint effects of both firm-specific and country-specific influences on reporting incentives. Even though the "pro-standards" viewpoint say that IFRS adoption alone can bring in high quality of financial reports due to the requirements of more disclosures, IFRS is a principle-based accounting standard that gives room for managers' to exercise a certain discretion in financial reporting. Thus, the empirical results show support for the "pro-incentive" school of thought (illustrated by the IPOO model) that due to the variations in reporting incentives from CBF, ICG and their interactions with IEF, there are different levels of "Influences" to managers' motivation in adopting IFRS, even when such adoption is mandatory. Subsequently, the "Processing" and "Output" of financial information under IFRS will lead to uneven quality in the financial reports for firms with different incentives and this translates in differences to the information available to capital markets. As a result, these differences in incentives and the informativeness of financial statements appear to be associated with differences in the COE effect (i.e. the "Outcome"). Therefore, and consistent with the literature (e.g. Ball et al., 2003), the installation of such uniform, high-quality financial reporting standards is of itself unlikely to be sufficient for achieving comparable and even distributions of capital

market outcomes, such as a lower COE. In fact, as Burgstahler et al. (2006) point out, despite decades of harmonization efforts by IFRS adoption, there are still considerable differences in the quality of financial reports across European firms.

Table 10.1 Comparing the Cost of Equity for Mandatory IFRS Adopters and the Effect of Internal Corporate Governance (ICG) & Core Business Factors (CBF) in different Legal Origins: German, British, Scandinavian & French Origins

This analysis examines the comprehensive proxies of reporting incentives in mandatory IFRS adoption in the IPOO model. The tests aim tot provide evidence of any significant change in the cost of equity when both CBF and ICG of mandatory IFRS adopters interact with each of the four legal origins (in Models 1 to 4).

Model 1:German Origin (GO)

Cost of equity = β0 + β1 (ICG) + β2(ICG*PMAdopters.*GO) + β3 (PMAdopters*HighCBF) +β4(PMAdopters*HighCBF*GO) + β5(Size) + β6 (Leverage) + β7 (ROA) + Year Dummies + Industry Dummies + Errors

Model 2:British Origin (BO)

Cost of equity = β0 + β1 (ICG) + β2(HigherICG*PMAdopters*BO) + β3 (PMAdopters*HigheCBF) +β4(PMAdopters*HighCBF*BO) + β5(Size) + β6 (Leverage) + β7 (ROA) + Year Dummies + Industry Dummies + Errors

Model 3:Scandinavian Origin (SO)

Cost of equity = β0 + β1 (ICG) + β2(ICG*PMAdopters*SO) + β3 (PMAdopters*HighCBF) +β4(PMAdopters*HighCBF*SO) + β5(PMAdopters*HighProfit*SO) + β6 (PMAdopters*MoreAnalysts*SO) + β7 (PMAdopters*LargerSize*SO) + β8 (Size) + β9 (Leverage) + β10(ROA) + β11 (Book-to-Mkt) + Year Dummies + Industry Dummies + Errors

Model 4:French Origin (FO)

Cost of equity = β0 + β1 (ICG) + β2(ICG*PMAdopters*FO) + β3 (PMAdopters*HighCBF) +β4(PMAdopters*HighCBF*FO) + β5(Size) + β6 (Leverage) + β7 (ROA) + Year Dummies + Industry Dummies + Errors

		Model 1: GO			**Model 2:BO**			**Model 3:SO**			**Model 4: FO**		
Variables	Predicted Sign	Coefficient		t-value	Coefficient		t-value	Coefficient		t-value	Coefficient		t-value
Intercept	?	0.173	***	33.788	0.154	***	22.964	0.169	***	33.639	0.185	***	36.359
Firms' ICG		-0.001	***	-5.528	0.001	***	2.492	-0.001	***	-4.497	-0.001	***	-7.775
Firms ICG*PMAdopters*LegalOrigin		0.001	***	2.86	-0.017	***	-5.326	0.001	***	6.11	0		-1.195
PMAdopters*HighCBF	-	-0.008	***	-4.937	0		0.055	-0.014	***	-7.93	-0.005	***	-2.715
PMAdopters*HighCBF*Legal Origin	-	-0.023	**	-3.523	-0.005		-1.7	0.022	***	3.803	-0.009	***	-3.174

PMAdopters*HighProfit*SO	-							-0.021	***	-5.82			
PMAdopters*MoreAnalysts*Legal Origin	-							-0.007		-1.752			
PMAdopters*LargerSize*SO	-							-0.003		-0.56			
Size	-	-0.01	***	-11.344	-0.016	***	-17.05	-0.011	***	-0.205	-0.014	***	-15.002
Leverage	+	0.019	***	5.351	0.031	***	8.456	0.028	***	7.769	0.031	***	8.4
ROA	-	-0.151	***	-20.607	-0.147	***	-20.448	-0.141	***	-18.899	-0.148	***	-20.385
Book-Market	+	0	***	2.881	0	***	12.42	0	***	4.422	0.015	***	12.301
Year Dummies		Included			Included			Included			Included		
Industry Dummies		Included			Included			Included			Included		
N		7294			7294			7294			7294		
R Square		20%			22%			21.70%			20%		
ANOVA (F-test)		65.549	***		73.412	***		64.022			64.441	***	
Durbin-Watson		1.847			1.878			1.884			1.848		
Tolerance for each variable		more than 0.1			more than 0.1			more than 0.1			more than 0.1		
VIF for each variable		less than 10			less than 10			less than 10			less than 10		
Mean of residual		0			0			0			0		
Mean of standard predicted residual		0			0			0			0		
Mean of standard residual		0			0			0			0		

**** = 1% p-value significant and ** =5% p-value significance*

10.2 Summary of the Hypotheses, Empirical Tests and Multivariate Results

After running all empirical tests, Table 10.2provides a summary of the relevant empirical tests and results for all the hypotheses.

From an examination of Table 10.2, it is evident that overall mandatory IFRS adoption has led to a lower COE than that for voluntary IFRS adoption. Also, Tables 9.1 to 9.14 report that a high level of CBF and ICG, in general, has both significant individual and interactive effects with mandatory IFRS adopters that relate to additional lower COE. Meanwhile, IEF by proxies of legal origins in Table 9-5 show that British (BO) and French (FO) firms have negative effects on the COE in mandatory IFRS adoption. On the other hand, German (GO) has a negative but insignificant coefficient, and Scandinavian (SO) firms have a positive and significant coefficient. When combined, both high CBF and legal origins, as shown in Table 9.6, reveal that mandatory IFRS adopters with strong CBF in most legal origins (except SO) experience a lower COE, but that the coefficient for BO is not statistically significant. It suggests that the COE reducing effects from mandatory adopters' strong CBF differ between legal origins. Furthermore, Table 9.7 records evidence about the negative COE effects from sectors A, B and C (but not D) that have institutional characteristics supportive of mandatory IFRS adoption.

To find out the effect on the COE from reporting incentive in the complete IPOO model, this study also examines the results of how mandatory adopters' strong CBF and ICG interact in each legal origin. Accordingly, Table 10.1 in Models 1 to 4 illustrates mandatory IFRS firms' interaction with high CBF or ICG, but not both, that are related to significant incremental lower COE effects in different legal origins (except for SO). Specifically, the lowered COE can be related to the combined effects when mandatory IFRS adopters in British (BO) interact with ICG; and when German (GO) and French (FO) firms work with strong CBF. It appears that mandatory IFRS adoption in different legal origins provides a substitution, not complementary effect between high CBF and ICG in order to enrich the reporting incentive; and ultimately associates with a further lowering of the COE.

Table 10.2: Summary of Hypotheses and Empirical Test Results

Operating Hypotheses	Test Tables	Empirical Test Results
OH1: The cost of equity for mandatory IFRS adopting firms is different from voluntary IFRS adopting firms for the whole period from 2000 to 2009.	Table 8-3	The test results supports prior research results (e.g. Li, 2010) and strongly support the hypothesis that the cost of equity for mandatory IFRS adopters is significantly lower than voluntary firms by -1.1%.
OH2: For mandatory IFRS adopting firms, the cost of equity in the post-mandatory period is not different from the pre mandatory period.	Table 9-1	The cost of equity for mandatory adopters during the post-mandatory period is not associated with a lower COE effect when compared with the pre-mandatory period.
OH3: (CBF) The cost of equity effect of mandatory IFRS adopting firms is negatively associated with strong CBF , other things being equal.	Table 9-2	The result of -0.4% lowering COE is in line with hypothesis #3 that higher CBF is associated with larger educing COE effect in mandatory IFRS adoption.
OH4a: (ICG) The cost of equity effect of mandatory IFRS adopting firms is negatively associated with high ICG , other things being equal.	Table 9-3	Table 9-3 records -1% coefficient for mandatory IFRS adopters with high ICG scores. Therefore, it shows a strong support for hypothesis #4a.
OH4b: **(CBF& ICG)** Ha: The cost of equity effect of mandatory IFRS adopting firms is negatively associated with strong CBF and ICG, other things being equal.	Table 9-4	The coefficient of the interaction effect between strong CBF and ICG shows a significant -0.6% in reducing COE effect. This result supports hypothesis #4b.
(IEF: legal origin) OH5: The cost of equity effect for mandatory IFRS firms is negatively associated with legal origins of BO and FO, but positively associated with legal origins of GO and SO, other things being equal.	Table 9-5	The following results support hypothesis #5: Table 9-5 model 1 shows that GO firms have -0.5% effect on the COE. Model 2 exhibits that the coefficient of BO firms have -1.3% lowering COE effect. SO firms face a 2.7% COE increase effect in mandatory IFRS adoption. For French-origin (FO) mandatory adopters, the dummy variable in Table 9.5 Panel A (model 4) indicates that it is significantly negatively related with the COE and has a coefficient of -0.4%.
OH6: The cost of equity effect for mandatory IFRS firms differs between strong CBF and their legal origins, other things being equal.	Table 9-6	Table9.6 (model 1) records the interaction between mandatory firms in GO and strong CBF has a significant coefficient (-1.3%). Model 2 shows that mandatory adoption by BO firms overall has the effect of lowering COE with a -1% significant coefficient. Table 9.6 (model 3) shows that statistically SO-based mandatory IFRS adopters are not negatively associated with any changes in their COE. Table 9.6 (model 4) shows that for the interaction between strong CBF and 4 legal origins, the only coefficient with a significantly negative effect on the COE is French-origin (FO) (at -0.8%).
OH7: The cost of equity effect for mandatory IFRS firms is negatively associated with countries from sectors A, B, C but not from sector D, other things being equal.	Table 9-7	Table 9.7 (model 1) show s that the interplay between sector A and mandatory IFRS adopters has significant 0.2% lower COE effect.

		Table 9.7 (model 2) presents evidence that the interactive function between Sector B countries' IEF and mandatory IFRS adoption augment additional significant negative coefficients (-0.2%). Sector C in Table 9.7 (model 3) documents that there is a -0.10% significant coefficient in the interaction between Sector C and mandatory IFRS adoption. Table 9.7 (model 4) is in line with hypothesis 7 that mandatory firms in sector D countries do not associate with any lowering COE effect (the coefficient equals 0).
OH 8: The cost of equity effect for mandatory IFRS firms differs between the legal origins and strong CBF and ICG, other things being equal.	Table 10.1	Table 10.1 model 1 presents evidence that mandatory adoption interacts with high CBF to result in a significant -0.8% reduction in the COE. However, the effect of GO-Mandatory firms' ICG has the opposite result for the COE (+0.1%). Table 10.1 model 2 shows that BO's strong CBF is negatively associated with the COE but is not highly significant and there is a greater coefficient (-1.7% and significant) for BO mandatory firms with higher ICG. Table 10.1 shows that FO mandatory firms' ICG index is not able to add any COE reducing effect (the coefficient equals 0) Strong CBF in SO mandatory firms does not help in reducing COE, unless these are relatively more profitable SO firms (the coefficient is -2.1% and significant). Also, mandatory firms in model 4 have a +0.1% COE effect for SO and ICG.

Table 10.3: Summary of the Significant Cost of equity (COE) Effects of Mandatory IFRS Adoption in the 4 Legal Origins in Interactions with CBF, ICG, IEF and Exchange Disclosure Requirements

IFRS Mandatory Adoption	CBF (Table 10-1)	ICG (Table 10-1)	IEF (Table 9-5 Panel A)	Exchange Disclosure Requirements (Table 10.4 Panel B)
GO	-2.3% **	0.1% ***	-0.5%	-2.7%
BO	-0.5%	-1.7% ***	-1.3% ***	-0.7% **
SO	0.22% ***	0.1% ***	2.7% ***	3.6%
FO	-0.9% ***	0	-0.4% **	0

Results from Table 10.2 and Table10.3 illustrate a few key noteworthy points from the research. First, mandatory IFRS adoption firms experience lower COE than their voluntary counterparts. Second, mandatory adopters' high level of CBF and ICG, and interaction between CBF and ICG are evident, and together they are statistically significant and negatively related to such firms' COE. Third, when we proxy IEF by legal origins and sectors, Table 9-6 and 9-7 report that only Sectors A, B and C; and British and French legal origins have infrastructures in cultural, legal, administrative and business practices that are supportive of mandatory IFRS adoption. These combined properties are statistically significantly associated with a lower COE. Fourth, it suggests that mandatory firms in EU countries exercise different dynamic and joint effects between CBF, ICG and IEF; when significant additional lowering COE effects may be associated with German (GO) firms' CBF, British (BO) firms' ICG and IEF, and French (FO) firms' CBF and IEF. However, Scandinavian (SO) mandatory IFRS firms appear not to have strong enough foundation in their institutional environment to indicate any significant effect on their COE. These empirical results are consistent with prior studies' argument that cultural, political and business differences may also continue to impose significant variations in the progress towards mandatory IFRS adoption as a single global financial communication system (Armstrong et al. 2008).

The empirical tests, so far, have examined the influence of reporting incentives from the effects of institutional environments, proxied by general and macro-level of cultural, economic, social and legal origins. However, recent studies also argue that specific institutional factors such as investor protection are possible influences on reporting incentives. In the following section, additional tests will be performed and evidence will be provided on how firms' COE is associated with specific institutional characteristics.

10.4 Additional Analysis from Specific Institutional Factors

Throughout the empirical analysis, this study argues that while firm-specific CBF and ICG may be controllable by management and the board of directors, country-specific IEF is a rigid and unique system that is beyond managers' discretion. To measure the effects of IEF, the four legal origins, and four sectors of institutions' bureaucratic and administrative formalities have been proxied as the institutional influences along the IPOO model. In addition to such comprehensive classification of IEF, some prior studies argue that there are specific institutional characteristics, such as the enforcement and protection mechanism in IFRS adoption that may be significant and affect the

change in the COE. Therefore, Table 10.4 Panel A reports the results from testing the COE effects between mandatory adoption and specific institutional factors.

Table 10.4 Panel A shows that among Stock Exchange Disclosure, Investor Protections and Securities Regulation in the model, only the coefficient of Stock Exchange Disclosure has a significant effect on the COE (at -2.3% and the 1% level of significance). Consistent with the literature, it can be interpreted that stock market exchange disclosure is an important macro-level factor to strengthen IFRS's reporting incentive for requiring greater and better disclosures. As a result, it is possible that the equity market rewards additional transparency from high quality accounting information with a lower cost of equity. Following this reasoning, this study extends the empirical tests to examine the effects on the COE when exchange disclosure interacts with CBF in the four different legal origins.

German Origin (GO) with Stock Exchange Disclosure

Table 10.4 Panel B (Model 1) displays that the overall mandatory adoption and exchange disclosure together have -3% on the COE (significant at 1% level). Also, German origin (GO) mandatory firms interact with exchange disclosure and are associated with an additional -2.7% effect on the COE but this is statistically insignificant. On the other hand, German (GO) firms' strong CBF in mandatory IFRS adoption has a coefficient of -1.5% COE effect (at 5% level of significance). These results are in accord with the prior results from Table 10.1 and the literature (Ball et al. 2003) that German (GO) firms lower COE as a result of mandatory IFRS adoption in such a weak regulatory environment, the is driven by reporting incentive from strong firm-specific CBF rather than the country level IEF effect, such as legal origin or specific IEF such as Stock Exchange Disclosure.

British Origin (BO) with Stock Exchange Disclosure

Table 10.4 Panel B (Model 2) indicates that the overall mandatory adoption and exchange disclosure mechanism in British origin (BO) acts to add another significantly negative -0.7% COE effect to mandatory IFRS adoption's exchange disclosure requirement (at -4.5% and significant at 1% level). On the other hand, strong CBF becomes significant in the British (BO) setting (-0.6%) when stock exchange disclosure is controlled for. Comparing these results to Table 10.6, where British (BO) mandatory firms with strong CBF have -0.5% but an insignificant coefficient, it highlights the

importance of Stock Exchange Disclosure as an effective IEF factor that enhances BO mandatory firms' strong CBF their COE. **Scandinavian Origin (SO) with Stock Exchange Disclosure**

Table 10.4 Panel B (Model 3) reports identical results to the previous similar tests that mandatory adoption's exchange disclosure in Scandinavian origin (SO) has a significant positive coefficient on the COE. This effect is more than able to offset the -1.8% lowering COE effect from the interaction between the overall mandatory adoption and exchange disclosure. Also, strong CBF for Scandinavian (SO) firms have no effect to further reduce the COE from the overall mandatory firms' strong CBF (at -0.4%). This suggests that in the process of mandatory IFRS adoption Scandinavian (SO) mandatory firms' COE is not lowered as a result of the exchange disclosure mechanism.

French-origin (FO) with Stock Exchange Disclosures

Different from the British setting, Table 10.4 Panel B (Model 4) shows that French (FO) mandatory firms' interaction with exchange disclosure has no additional COE effect (the coefficient equals 0) in addition to overall mandatory IFRS firms' exchange disclosure. Similar to the test result from Table 9.6, it is evident that French (FO) mandatory firms interact with strong CBF, rather than stock exchange disclosure, and this is associated with a lowered COE (at -0.9% and significant at the 1% level).

To sum up, the empirical results suggest that even though Table 10.4 Panel A highlights the relative overall significance of Exchange Disclosure, Table 10.4 Panel B stresses there are significant regional differences in that only British (BO) mandatory firms in Exchange Disclosure benefit significantly from any additional reduction in their COE. This result is similar to Table 9.6 (Model 2) which shows that only mandatory firms in BO setting experience a -1% lowering of their COE. It suggests that Exchange Disclosure primarily interacts with British origin (BO). It can be interpreted that for BO countries, capital markets are deeper and more established than in the other legal origin countries to support the mandatory IFRS adoption. In addition, when Exchange Disclosure is included in Table 10.4 Panel B (Model 2), BO mandatory firms interact with high CBF with a significant -0.6% lowering effect on the COE. It implies that Exchange Disclosure can complement with British (BO) firms' high CBF to lower their COE. These results are not consistent with the prior study by Kim and Shi (2007) who record significant negative COE effects from Exchange Disclosure, Investor Protection and Securities Regulation. Possible reasons for the difference in the results may be

because Kim and Shi (2007) measure voluntary adoption with a sample that covers the period from 1998 to 2004. However, this study examines mandatory adoption which includes data from 2000 to 2009. Hence the sample and time periods differ between the two studies. As was argued earlier, the longer post adoption time period and the fact that the current study includes both voluntary and mandatory adopters helps to explain these differences. In addition, the study by Kim and Shi (2007) does not partition countries by legal origins. Thus, this study shows that when mandatory adopting firms are classified by diverse legal, cultural and economic backgrounds and measured beyond the transition period, substantial lowering COE effects in the British (BO) setting seem to be mainly associated with specific IEF.

Overall, results from models in Tables 9 and Tables10 illustrate a few key noteworthy points. First, mandatory IFRS adopters experience lower COE than their voluntary counterparts. Second, mandatory adopters' high level of CBF and ICG, and interaction between CBF and ICG are evident and together they are statistically significant and negatively related to the COE. Third, when this study proxies IEF by legal origins and sectors, Table 9-6 and 9-7 report that only Sectors A, B and C; and legal origins of BO and FO have infrastructures in cultural, legal, administrative and business practices that are supportive of COE effects when there is mandatory IFRS adoption. Fourth, it suggests that mandatory firms in EU countries exercise differential joint effects between CBF and ICG, depending on their IEF in that significant additional lowering COE effects may be associated with German (GO) firms' CBF, British (BO) firms' ICG and IEF, and French (FO) firms' CBF and IEF. However, Scandinavian (SO) mandatory IFRS firms appear not to show any effects from their institutional environment in relation to any significant lowering of their COE. The results are consistent with prior studies' arguments that cultural, political and business differences may also continue to impose significant variations in the progress towards mandatory IFRS adoption as a single global financial communication system (Armstrong et al. 2008).

The empirical findings provide evidence that in mandatory IFRS adoption, the IPOO model identifies influences on reporting incentives that are associated with substantial and significant effects on firms' COE. Such influences are dependent upon the interactions between firm-specific CBF and ICG, and country-specific IEF where mandatory firms are domiciled.

Table 10.4
Panel A
Comparing the Cost of Equity Effect from ICG and 3 Enforcement and Protection Mechanisms

Some prior studies argue that specific institutional factors are significantly associated with firms' COE.

This study tests the COE effect by including both internal governance (ICG) and three selected specific external institutional environments that may influence firms' reporting incentives in mandatory IFRS adoption.

Model:

Full-sample Results of Comparing the Cost of Equity for Firm's ICG and specific institutional factors

Cost of equity = β0 + β1 (ICG) + **β2(Stock Exch. Disclosure)** + β3(Investor Protection) + B4(Securities Regulations) + β5(Size) +β6(Leverage) + β7(ROA) + β8 (Log of BM) + + β9 (year dummy) + β10 (Industries dummy)+ error terms

Variables	Predicted Sign	Coefficient		t-value
Intercept	?	0.185	***	33.896
Firms' ICG score	-	-0.001	***	-5.797
Stock Exch. Disclosure	-	-0.023	***	-4.267
Investor Protection	?	0	**	6.052
Securities Regulations	?	0	***	2.127
Size	-	-0.016	***	-20.793
Leverage	+	0.036	***	10.008
ROA	-	-0.147	***	-20.88
Log of Book-to-Market ratio	+	0.016	***	14.356
Year Dummies		Included		
Industry Dummies		Included		
N		7294		
R Square		22%		
ANOVA (F-test)		76.435	***	
Durbin-Watson		1.891		
Tolerance for each variable		more than 0.1		
VIF for each variable		less than 10		
Mean of residual		0		
Mean of standard predicted residual		0		
Mean of standard residual		0		

**** = 1% p-value significant and ** =5% p-value significance*

Table 10.4 Panel B: Comparing the Cost of Equity for Mandatory IFRS Adoption and the Effect of Exchange Disclosure in Four Different Legal Origins

When exchange disclosure is shown as the significant factor (Panel A), I test how firms' CBF and ICG interact in four different legal origins that lead to the association with the COE.

Model 1:GO

Cost of equity = β0 + β1 (PMAdopters*HighCBF) + β2(PMAdopters*HighCBF*GO) + β3 (PMAdopters*ExchangeDisclosure) +β4(PMAdopters*ExchangeDisclosure*GO) + β5(Size) + β6 (Leverage) + β7(ROA) + β8(Log of Book-to-Market) + Year Dummies + Industry Dummies + Errors

Model 2: BO

Cost of equity = β0 + β1 (PMAdopters*HighCBF) + β2(PMAdopters*HighCBF*BO) + β3 (PMAdopters*ExchangeDisclosure) +β4(PMAdopters*ExchangeDisclosure*BO) + β5(Size) + β6 (Leverage) + β7(ROA) + β8(Log of Book-to-Market) + Year Dummies + Industry Dummies + Errors

Model 3: SO

Cost of equity = β0 + β1 (PMAdopters*HighCBF) + β2(PMAdopters*HighCBF*SO) + β3 (PMAdopters*ExchangeDisclosure) +β4(PMAdopters*ExchangeDisclosure*SO) + β5(Size) + β6 (Leverage) + β7(ROA) + β8(Log of Book-to-Market) + Year Dummies + Industry Dummies + Errors

Model 4: FO

Cost of equity = β0 + β1 (PMAdopters*HighCBF) + β2(PMAdopters*HighCBF*FO) + β3 (PMAdopters*ExchangeDisclosure) +β4(PMAdopters*ExchangeDisclosure*FO) + β5(Size) + β6 (Leverage) + β7(ROA) + β8(Log of Book-to-Market) + Year Dummies + Industry Dummies + Errors

		Model 1: GO			**Model 2:BO**			**Model 3:SO**			**Model 4: FO**		
Variables	Predicted Sign	Coefficient		t-value	Coefficient		t-value	Coefficient		t-value	Coefficient		t-value
Intercept	?	0.182	***	41.401	0.173	***	46.793	0.174	***	47.6	0.175	***	47.311
PMAdopters*HighCBF	?	0		-0.195	0.003		1.163	-0.004	**	-1.954	0.004		1.772
PMAdopters*HighCBF*LegalOrigin	-	-0.015	**	-2.265	-0.006	**	-2.358	0.007		1.842	-0.009	***	-3.437

PMAdopters*ExchangeDisclosure	+	-0.03	***	-7.934	-0.045	***	2.688	-0.018	***	-7.407	-0.021	***	-8.15
PMAdopters*ExchangeDisclosure *LegalOrigin	?	-0.027		-1.782	-0.007	**	-2.561	0.036	***	5.988	0		0.142
Size	-	-0.016	***	-16.254	-0.016	***	-17.316	-0.017	***	-18.571	-0.015	***	-16.545
Leverage	+	0.032	***	8.566	0.032	***	8.647	0.04	***	10.725	0.033	***	8.872
ROA	-	-0.145	***	-20.051	-0.147	***	-20.381	-0.145	***	-20.381	-0.148	***	-20.54
Log of Book-to-Market	+	0.015	***	12.318	0.015	***	12.632	0.016	***	13.683	0.016	***	12.932
Year Dummies		Included			Included			Included			Included		
Industry Dummies		Included			Included			Included			Included		
N		7294			7294			7294			7294		
R Square		22%			22%			23%			22%		
ANOVA (F-test)		72.736	***		73.463	***		80.468			73.007	***	
Durbin-Watson		1.877			1.879			1.913			1.876		
Tolerance for each variable		more than 0.1			more than 0.1			more than 0.1			more than 0.1		
VIF for each variable		less than 10			less than 10			less than 10			less than 10		
Mean of residual		0			0			0			0		
Mean of standard predicted residual		0			0			0			0		
Mean of standard residual		0			0			0			0		

**** = 1% p-value significant and ** =5% p-value significance*

Chapter 11 - Conclusions

The purpose of this research study was to revisit, extend, validate and expand prior studies about the importance of reporting incentives in mandatory IFRS adoption. To incorporate the concepts of reporting incentives, the model of accounting harmonization (Rahman et al. 2002) is expanded into the four sequential components, namely, influences, process, output and outcome (IPOO). It is conjectured that in mandatory IFRS adoption, "Influences" will impact managers' reporting incentives, which will subsequently determine the quality of "Output" from IFRS adoption. Presented with high quality financial reports, the capital market incorporates this new information which may then be associated with positive economic "Outcomes", such as a reduced cost of equity (COE) Following the approach used by earlier studies, the empirical analysis tests whether the reporting incentives in the IPOO influence firms' COE. The effect on firms' COE arises because when more transparent financial information is produced by strong reporting incentives, the risk from information asymmetry between managers and investors is lessened. As a result, equity investors are willing to lower their required rate of return.

Prior studies argue that financial reporting practice under a given set of standards is sensitive to the incentives of the managers responsible for financial statement preparation (Ball et al. 2003). Most of the early studies understand the limitation from just examining voluntary IFRS adoption with limited data availability in the transition period and recognize the need for measuring more meaningful results in post-IFRS studies (Schipper, 2005, Nobes 2005). For mandatory IFRS adoption, however, the majority of the literature only focuses on a particular, hence not comprehensive, aspect of reporting incentives. A key aspect of this study is that it explores the importance of reporting incentives in both the firm and country-specific elements of the IPOO model and determines whether there is an observable and statistically significant effect on firm's COE from mandatory IFRS adoption. Such mandated adoption of new accounting standards allows the present study to examine financial reports prepared under identical, high-quality standards by firms domiciled in EU countries that have different cultural, social, regulatory and firm-specific incentives.

Following the rationale of the literature, it may not be empirically conclusive to link financial reporting quality directly to the cost of equity (Gassen and Sellhorn, 2006). This research study measures significant change in the COE as the subsequent effects (i.e. Outcome), following the mandatory IFRS adoption from the strong reporting incentives (i.e. Influence) in the IPOO model. Controlling for potential multicollinearity and endogeneity issues and using more data that is now available and better measurement metrics for estimating the ex-ante cost of equity, evidence is found that, on average, the cost of equity (COE) for mandatory IFRS adopters is 1.1% lower than that of voluntary adopting firms. It suggests that mandatory adopters are different from their voluntary counterparts in respect to the substantial reduction of their COE. This initial result has two implications. First, while the literature documents evidence that voluntary IFRS adopters experience a lower COE, this may be valid for the voluntary period. Second, when IFRS is mandated as it is for the EU from January 1, 2005, for such firms looking at the EU as a whole accounting quality has improved. This is so, since mandatory IFRS adoption requires more and better disclosures than most local GAAP. According, more and better disclosures are associated with a reduced COE (Botosan 1997; Easley and O' Hara 2004; Barth et al. 2007).

Also, with more data available in this study, the empirical tests show that the COE has not been reduced significantly between the pre and post mandatory period and which is contrary to the recent prior studies (e.g. Li, 2010). This finding arises even though the data is extracted from the same database as Li's study (i.e. ComputStat). The reason is this study uses more extensive data following the mandatory adoption, and a better proxy for firms' COE (i.e. PEG model) to prove that the reduced COE recorded in prior studies is mainly attributable to the transition period. Moreover, this result is also consistent with the literature that when all firms are required to implement IFRS, the accompanying positive effects from bonding and network will no longer apply to firms' signaling their commitment to transparency to the capital markets (Coffee, 2002). Also, the potential benefits from signaling theory (Spence 1973) for countries willing to adopt IFRS voluntarily are no longer available in a mandatory IFRS adoption environment.

In order to apply the comprehensive proxies of reporting incentives in mandatory IFRS adoption, tests on both firm-specific and country-specific variables in the change of COE have been conducted. First, it is evident that, in general, for mandatory IFRS adopters their core business factors (CBF) are significantly related to a reduction in their

COE. In addition, the interaction between strong CBF and internal corporate governance (ICG) mechanisms has a negative coefficient that is related to an additional lower COE effect for mandatory IFRS adopters. The literature on prior studies on voluntary adoption provides evidence to highlight that certain firm-specific characteristics are the important reporting incentives. The documented empirical results presented in this thesis show support for the hypotheses that systematic firm-specific CBF and ICG are equally important to motivate firms to adopt IFRS, and lead to a lower COE, even in a mandatory setting.

Second, when IEF is proxied by legal origins is controlled for in the models, differential COE effects are evidently related to the diverse legal, economic, cultural and national backgrounds in the EU. For German-origin (GO), British-origin (BO) and French-origin (FO) settings, there are statistically significant coefficients between the legal origins and lowering of the COE for mandatory firms. For Scandinavian-origin (SO) firms, however, there is no negative COE effect in mandatory IFRS adoption. Furthermore, this study follows recent studies to proxy IEF by the 4 sectors representing different focuses from the comprehensive measurement of institutions' bureaucratic and administrative formalities. The results are consistent with the hypotheses that Sector A, which emphasizes institution's legal and enforcement, interacts with mandatory IFRS adoption and results in a significantly lower COE. Sectors B and Cs' fixed-effect and interaction between each sector and mandatory IFRS adoption also link with a significant lower COE effect from the established institution of capital market. However, for Sector D, which focuses more on labor market and social relations, respect for labor laws and circulation of workers, it is possible that firms' reporting incentive for high quality of financial information to equity investment is not promoted and emphasized. As a result, mandatory IFRS adoption in Sector D does not interact to produce a lowered COE.

To test the combined effects of the proxies for reporting incentives in mandatory IFRS adoption, an interaction variable between firms' strong CBF and ICG in different legal origins is included to measure any change in the COE. As a result, German (GO) firms interact with strong CBF and this becomes a very significant coefficient to such reduce firms' COE. For French origin (FO), firms' strong CBF is measured as the most profound motivator to reduce their COE following mandatory IFRS adoption. For British (BO) firms, ICG is a significant coefficient, implying that when British origin

has local accounting standards compatible with IFRS, equity investors are concerned more about how the firms are governed in mandatory IFRS adoption. For Scandinavian origin (SO), however, the only significantly lower COE effect is associated with firms with higher profits. Also, there are insignificant results for larger sized firms with more analysts followed. It suggests that in mandatory IFRS adoption, Scandinavian firms may need to take a longer time to evolve from their heavy social market-based to a capital market-based economy; and subsequently benefit from a lower COE post IFRS adoption. Thus, the overall research results are consistent with the interaction effects from within and between firm-specific core business factors, internal corporate governance mechanism and country-differences in institutional factors on the cost of equity.

Finally, where specific IEF's have been examined by prior related studies, this study performs additional analysis to test what specific institutional factor(s) may be significantly linked to a lower COE. In those cases where the findings show that only stock exchange disclosure requirements present a highly significant coefficient, this study further tests how exchange disclosure interacts with strong CBF in the different legal origins. This indicates that there are complementary effects for those German and British (GO and BO) firms which have a strong CBF and exchange disclosure which acts to further reduce their COE. On the other hand, for French firms (FO) there is no effect. However, Scandinavian (SO) firms show a positive coefficient on their cost of equity when linked with stock exchange disclosure.

Overall, this study contributes to the literature by revisiting, validating and challenging the results of prior studies. In particular it examines if the COE is lower by mandatory IFRS adoption by testing for an extended the post-mandatory adoption period. More importantly, this research studies and explores the importance of reporting incentives in adopting new accounting standards that associate with a reduction in firms' COE. Therefore, the empirical results can be interpreted as follows: while this study documents a reduced COE effect for the overall mandatory IFRS adoption sample of firms, the reduction would appear to be mainly attributable to a subset of adopters which have strong reporting incentives.

In particular, these comprehensive proxies of reporting incentives include firm-specific strong core business factors and board of directors' internal corporate governance, as well as country-level institutional environment factors. This study shows that "Influences" in the IPOO model behave and interact in different ways to shape firms' reporting incentives and this, in turn, leads to differences in the effects on firms' COE. An important finding of this research is that the empirical results support the incentives-view that if firms are influenced by particular internal and external characteristics to have strong reporting incentives in mandatory IFRS adoption, firms will commit in full compliance. Accordingly, under the incentives-view, information asymmetry between investors and managers should be improved. However not every firm will have strong incentives even under mandatory IFRS. Without this firm-specific motivation to augment reporting incentives, mandatory IFRS adoption does not necessarily produce a higher quality of financial information which then translates to a substantial and significant lower COE.

In addition, the test results using ICG in the analysis supports the view that firms' internal corporate governance systems are important in order to provide sufficient control to ensure managers' commitment in mandatory IFRS adoption. Such mechanisms aim to protect shareholders' interests and the result is that capital markets will reward such firms by demanding a lower COE from these. However, not every company's board of directors is willing and able to establish internal corporate governance mechanisms that achieve this outcome. As a result, differential levels of governance may not lead to high levels of reporting incentives for managers when adopting IFRS.

Finally, country-specific institutional factors are different in the various regions of the EU. Empirical test results show that differences in cultural and business practices may exert an influence to managers' reporting incentives. This research study may help in our understanding of how important certain institutional environments such as cultural differences, regulations and enforcement policies are in order to influence firms' reporting incentives and which in turn may lead to or sustain a full compliance of mandatory IFRS adoption. Even though the EU has adopted a common set of accounting standards, there are highly diverse institutional settings within different European countries that may shape reporting incentives. The empirical findings presented here indicate that these differences shape reporting incentives and hence lead

to differences in firms' COE. Specifically, strong core business factors in Germany (GO) are highly significant in mandatory IFRS adoption and relate to such firms' COE. However, for some jurisdictions which already have high quality of accounting standards and established capital market structure, like British firms (BO), then a high level of internal corporate governance (ICG) becomes a more primary driver in relation to a lower COE. French (FO) firms, on the other hand, exhibit modest but statistically significant negative COE effects in both CBF and ICG. These test different results provide support for the IPOO model where reporting incentives for mandatory IFRS adoption are influenced by individual firm and country-specific factors that result in substantial variations in firms' cost of equity effects.

However, there are a number of caveats to these results that could be improved for further research. First, it only focuses on the cost of equity reduction as the proxy for capital market benefit because it is believed that this is an important outcome that directly impacts the returns of firms' investments. In addition, cost of equity is an indicator of the reduction of information asymmetry that occurs when high quality financial reports are communicated from managers to investors through IFRS adoption. However, prior studies also propose other measures for the information asymmetry component, such as a significant reduction in the bid-ask spread (Platikanova and Nobes, 2006), concentration of insider holdings (Chiang and Venkatesh, 1988), or residual volatility in a firm's stock returns (Krishnaswami et al., 1999). Hence, future research studies may need to test on these and other measures which may provide a more comprehensive proxy for the reduction in information asymmetry that is one of desired outcomes of mandatory IFRS adoption. As the findings presented here for Scandinavian-origin (SO) firms do not support the reduction in the cost of equity that is the case for firms elsewhere, there may be other possible outcomes for Scandinavian firms after the mandatory IFRS adoption that need to be examined.

Second, measures of the ex-ante cost of equity heavily depend on analysts' consensus forecasts, which may be biased and are possibly subject to forecast errors. Third, using the Deminor credit ratings to proxy for the extent of internal corporate governance provides a comprehensive and all all-inclusive variable, these credit ratings may be biased towards large sized firms listed on stock markets. It is possible that certain specific corporate governance metrics measuring different firm-specific characteristics, such as capital structures, industries and legal origins, may provide different results.

Finally, even though the sample data in this study captures a relatively longer period of post-mandatory period than most prior studies, it is believed that test results may be more insightful if they analyze an even longer time period post the adoption period in order to measure the long-run sustainable effects from mandatory IFRS adoption.

Because of the data availability the samples are drawn from European countries. When other countries, such as Australia, Japan and Canada, have gradually adopted IFRS as their local standards, there will be more data available to examine the relationship between mandatory IFRS adoption and other possible capital market outcomes. A wider range of countries with their own IPOO factors will improve the ability to undertake the tests carried out in this thesis and should provide more robust coefficients of the effects identified here.

Elaboration of the managerial and policy implications of the study's findings

The empirical findings of this study highlight that, even though the intended aim of making IFRS mandatory in the countries used for this study is to enhance accounting disclosures, without the proper incentives, it is unlikely that it will achieve this objective. What the study finds is that country, institutional, and firm-specific influences affect the quality of the disclosures under mandatory IFRS reporting. That is to say, those managers who are not incentivised to embed within their firms the new disclosure requirements required under IFRS will make cosmetic adjustments to their general purpose financial statements that conform to the requirements but fail to provide the necessary new additional disclosures in a meaningful way. To benefit from IFRS, firms need to have what is described in the research as strong reporting incentives. As argued in the study, at the firm level, manager stewardship functions would be required to promote firms' profitability, expansion, and growth opportunities. In doing so, managers then align the firm-specific characteristics with the genuine requirements of IFRS adoption through greater and better disclosure. Without such internal drivers, it is unlikely managers will do more than cosmetically commit to mandatory IFRS adoption.

In addition to managers' efforts, there are fiduciary duties that the board of directors have to fulfill in protecting shareholders' interests. Consequently, the board of directors' effective internal corporate governance mechanisms are vital to ensure IFRS is adopted with on-going firm-wide full commitment. Clearly, the implication of this is that in order to benefit fully from the additional disclosure and transparency that comes from

IFRS, firms that have less effective boards of directors need to improve their internal governance mechanisms. The implication for regulators is that improving corporate governance has a significant payoff in reducing information asymmetry between firms and the capital market. The research indicated that this translated into a significant reduction in firms' cost of equity of 1 percent (Table 9.3, Model 2).

Moreover, the macro-level institutional support through disclosure regulations, business practices and culture in promoting IFRS adoption is also found to be a significant factor. This study highlights that such country-specific institutional environment factors are supportive for firms mandatory adoption of IFRS, and are associated with a significant reduction in firms' cost of equity. In highlighting the importance of legal origins, disclosure enforcements, and capital market development as having a positive role in leading to a lower COE through mandatory IFRS adoption, this study provides some guidance to regulators and politicians as to how to foster more effective disclosure. It makes sense therefore for policy makers to enhance efforts within the EU, for instance, to harmonise country regulations. But equally, it applies at the global level where adopting a clear legally enforceable disclosure and contractual environment would help to improve the effectiveness of IFRS. Therefore, this study therefore argues the relative importance of legal origins, disclosure enforcements, and capital market development that regulators and politicians should foster as supporting functions for IFRS adoption.

According to the IPOO model, when 'Influences' are strengthened by strong reporting incentives at the firm and country levels, the 'Process' will be a significant or substantive-type of adoption (Daske, et al., 2008). Such motivated adoption of IFRS will in turn feed into the 'Output' as high quality of financial statements that disclose greater and more useful information. As a result, the information asymmetry between the managers and investors is reduced. As a consequence, the desirable 'Outcome' through the positive capital market benefits of better information of a reduction in terms of firms' cost of equity. The research is therefore generally supportive of regulators efforts to get firms to adopt IFRS in a meaningful way.

Clearly the best outcome from a disclosure perspective is when both the internal, firm-specific factors and the country and institutional factors work in tandem. One wider policy implication therefore is that when crafting regulations, the interaction of the above factors should be considered.

Amplification of the scope for future research

Using a set of better proxies and more data than has been available to prior research, the findings of this study highlight the relative importance of reporting incentives in mandatory IFRS adoption. However, while the present study does examine this within the IPOO model, the fundamental role of internal corporate governance in monitoring and regulating managers to ensure they have strong reporting incentives should be examined in more detail than was possible in the present research.

Consequentially, one possible future area for research is to examine the relationship between corporate governance mechanisms and reporting incentives in mandatory IFRS adoption using better indicators of corporate governance effectiveness. In the growing global acceptance of mandatory IFRS adoption, more (since IFRS favours the needs of shareholders), the availability and desirability of equity-based financing practices may be enhanced. This applies especially in the international context for, when more equity investments occur across borders, countries which previously relied on debt or bank-financing are able to switch to a more equity-based source of funds. As a consequence, the corporate governance issues from the separation of control and ownership raised by widely spread equity investors may become more prominent. Given inadequate corporate governance, managers who control the business may be able to deviate from the objective of maximising shareholders' wealth towards promoting personal benefits to the detriment of shareholders. To address this, much better and rigorous corporate governance systems for both internally and externally-based mechanisms are needed. On one hand, there are uncoordinated and disparate developments in corporate governance systems among companies and countries. On the other hand, there have been improvements in corporate governance codes and systems in the EU since mandatory IFRS adoption. Therefore, this study attempts to examine if the benefits from corporate governance in mandatory IFRS adoption are unevenly distributed.

In addition, besides the core business factors and internal corporate governance, it will be interesting to study if there are additional significant factors that influence managers' incentives in mandatory IFRS adoption. For instance, stronger reporting incentives may be associated with managers' personal traits as intrinsic motivation from ethical, religious, and moral standards that may regulate their behavior that leads to a high level

of stewardship when adopting IFRS. Other possible factors such as corporate culture, the extent of social responsibilities and environmental awareness may be also reinforcing managers' incentives in pursuing the genuine adoption of transparency, even if this is being mandated by accounting regulations. However, such opportunities may involve a normative approach, rather than the positivist paradigm commonly used in accounting research.

The extant literature always proxies accounting quality by the level of earnings management practice and examines if it is improved following the IFRS adoption. If IFRS demands more transparent accounting information and disclosures from the business, then it is reasonable to expect that IFRS may be associated with more volatile reported earnings. An increase in the volatility of reported is an indicator of lower earnings management. Meanwhile, in view of the unwanted volatility in reported earnings, management and/or shareholders may be tempted to undertake income-smoothing in order to signal a progressive growth in the business. This is particularly likely to take place when management has to meet both internal and external targets (e.g. EPS) in order to satisfy analyst forecasts and to keep the share price high. Thus, earnings management techniques and practices may become more commonly applied, even in an IFRS setting. However, the empirical results of the literature are still inconclusive as to whether IFRS adoption brings along reductions in earnings management between the pre- and post-adoption periods. One reason is that it is possible that prior studies did not adequately control for other important factors such as the effectiveness of corporate governance. Also, it is rare in the literature to discuss the genuine relationship between earnings management practices and reduction in the cost of equity in mandatory IFRS adoption.

Moreover, this study recognizes the relative dominance of UK firms in the total mandatory IFRS adoption sample. Given that the UK has the most publicly-listed companies within the EU and hence they make up a significant sub-sample of firms that have mandatorily adopted IFRS, it may be interesting to compare UK companies with firms in other countries in Asia or North America where both have mandatorily adopted IFRS and where there are identical or different institutional settings. Given what the present research suggests, it would be useful to confirm whether when firms in different countries have adopted mandatorily IFRS but with different proxies of reporting incentives, the related capital market benefits will be unevenly distributed.

Finally, there may be certain industries/sectors in the EU that have been receiving more capital market benefits (such as greater reduction of the cost of equity) than others. There could be some particular internal and external factors and settings that are associated with such industries and sectors. Exploring and identifying these factors has public policy implications, since may indicate the best regulatory direction for other jurisdictions to mimic and practice.

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